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WELCOME
FROM THE EDITOR



YOU MAY THINK THAT close-up and macro photography is a highly specialised field reserved for boffins, but the techniques in this issue show how accessible it can be. What's more, because your subject occupies such a small space, you really can shoot amazing pictures absolutely anywhere! We unlock the charms of macro on p26, and for every reader, we have an exclusive discount on a full case of close-up filters from SRB. Details for this are on p110, and when you've succumbed to the macro bug (it happens to all of us!), you'll find in-depth reviews of macro lenses and accessories starting on p113.

The Filter menu in Photoshop can be seen as a life-saver or an array of garish effects, depending on your experience, but in *Photoshop Genius*, we reveal some of its true potential in a series of creative projects. Follow them through with the start images provided on the CD, and new ideas for enhancing your own pictures are guaranteed to spring into place!

Last but not least, we have a tremendous subscription offer on p24 that's a steal for all keen photographers. It's 26 issues of *Digital Photo* for the price of 13. Bargain!

Jon Adams Editor
jon.adams@bauermedia.co.uk



DIGITAL PHOTO
Brought to life on iPad

Built from the ground up to make the most of the iPad's interactive features, the digital edition of the UK's best photo mag brings you all your favourite content from the printed mag and CD in one great app! The video lessons are embedded within the app so no streaming is involved once you've downloaded your copy, and they play back with the tap of a finger so getting to grips with the latest techniques couldn't be easier.

Visit *www.greatmagazines.co.uk* to find out more or turn to p24 for a fantastic digital subscription offer.

Three ways we'll help you get better pictures this month



1 Inspirational shooting ideas

Taking a trick shot that involves a careful camera setup with a smattering of imaging finesse is the perfect way to to spend a Sunday afternoon. Play your cards right on p36!



2 Top Photoshop techniques

From custom-coloured buildings to electric portrait effects, we serve up a variety of exciting, Filter-based imaging projects in this month's Photoshop Genius. See p69.



3 The best gear buying advice

Alongside reviews of the latest Canon EOS 750D and Tiffen's Dfx software, we test macro lenses starting at the enticing price of just £185. Turn to p113 for the lowdown.

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AUGUST

DIGITAL PHOTO

Inspiration

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Get inspired by our all-new gallery of pics from the world's best photographers.

20 IT WORKS FOR ME!
Readers share their pics and stories after being inspired by *Digital Photo* projects.

60 THE BIG INTERVIEW: OLAF PIGNATARO COVER STORY
The extreme sports photographer counts Red Bull among his client list and reveals his approach to shooting spectacular images.

100 YOUR PICTURES
Constructive critique from our experts and ideas for image improvements.

146 DIGITAL DOCTOR
Our resident Photoshop medic applies cosmetic surgery to reinvent a shot.

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Capture an impossibly-timed card trick using shooting & Photoshop knowhow.

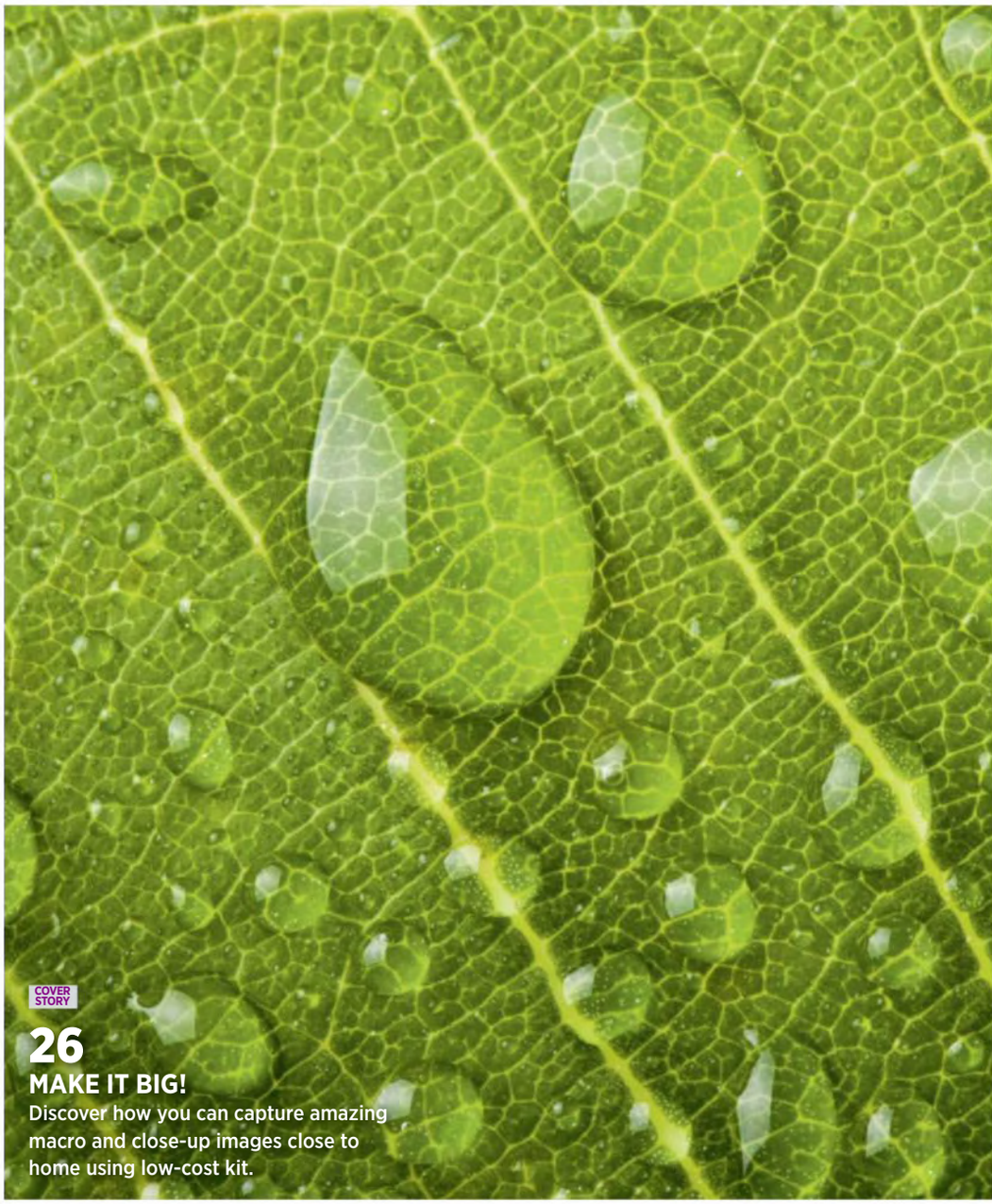
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Improve your shooting knowledge with our in-depth guide to shutter speed.

50 MAKE YOUR OWN GEAR
Build an effective reflector for a few pence to sculpt the lighting in your shots.

52 SHOOT IT NOW COVER STORY
Capture well-known landmarks in exciting new ways with this creative technique.

54 WHY THIS SHOT WORKS
Expert insight on the secrets of success behind an evocative summer landscape.

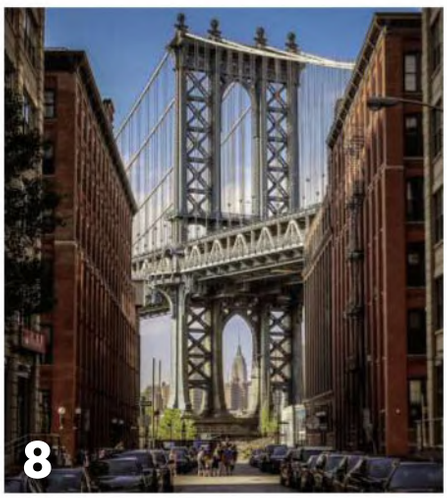
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Take on the challenge of turning a humble



COVER STORY

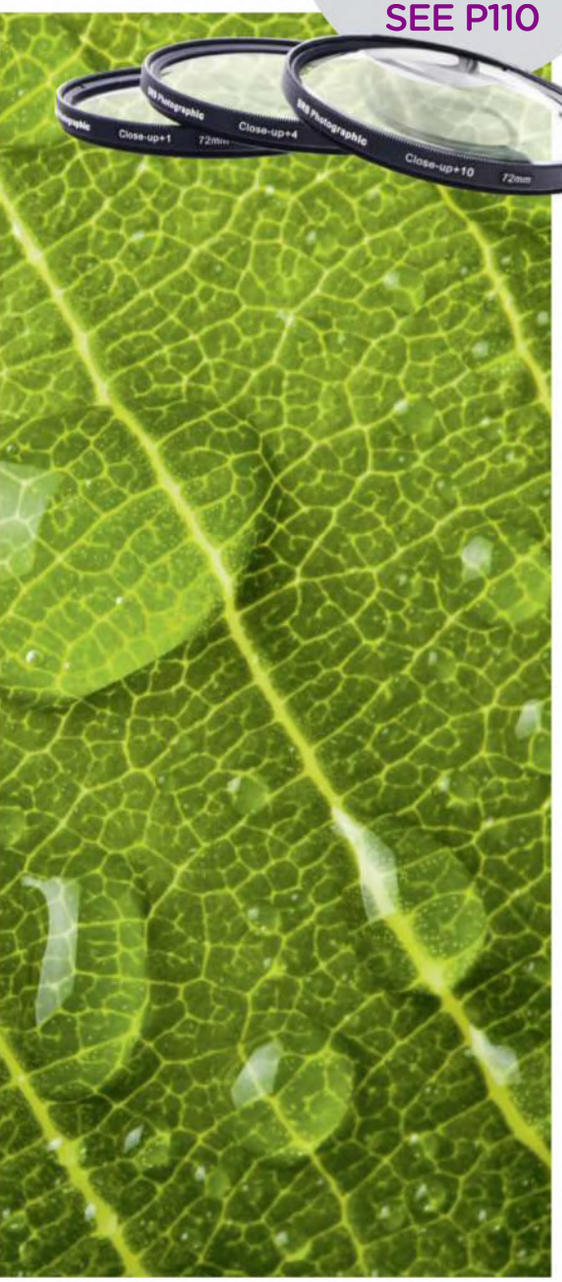
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MAKE IT BIG!
Discover how you can capture amazing macro and close-up images close to home using low-cost kit.







30% OFF CLOSE-UP FILTERS!
SEE P110



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Use the Liquify Filter to transform the appearance of a humble sunflower!

76 MAKE PAINTING EFFECTS COVER STORY
Turn your photos into fine-art watercolours using a combination of Filters.

78 MAKE ELECTRIC PORTRAITS COVER STORY
Add digital lightning effects to create futuristic portraits with the 'wow' factor.

84 ADD COLOUR TO BUILDINGS COVER STORY
Reinvent your architectural shots by applying custom colours courtesy of the Photo Filter.

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90 FILTERS MASTERCLASS COVER STORY
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The latest entry level DSLR from Canon sees a bigger sensor plus smart-device compatibility.

130 TIFFEN DFX 4
This standalone image-editing software offers a multitude of finishes you can customise.

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ADD A TWIST TO BUILDING SHOTS

84 Get colourful with the Photo Filter


LIGHT UP YOUR PORTRAITS

78 A bolt from the blue is easy to do!



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26 issues of the UK's best photography magazine delivered to your door for the price of just 13. Get in quick for a bargain!

106 PHOTOANSWERS
Learn about Photoshop's Blending Modes, the quality difference between RAW files and JPEGs, how to patch up shots plus the key to shooting consecutive long exposures!

111 NEXT MONTH
A swift preview at the exciting stuff coming your way in the September issue.

9 VIDEO TUTORIALS ON YOUR FREE CD



123 MINUTES OF EXPERT ADVICE

Pop the *PhotoSkills* CD in your PC or Mac and get set for a brilliant learning experience. There are nine in-depth video lessons on the disc, all brought to you by the same team of expert photographers that make the magazine. Each video is created exclusively to help you master core imaging skills. Because you get to watch our experts talk you through the whole process, it's a bit like receiving one-to-one tuition, only you're in charge of when it happens! Plus you can watch the videos as many times as you like, and practise the techniques described using the actual pictures from the magazine.

This month, we help you master a variety of special filter effects in Photoshop. Sit back and watch the projects come to life on screen, and you'll be trying out the techniques in no time. It's a fantastic method of learning and ensures you'll get the best out of your photography.



1 CARD TRICK
Discover how to create the illusion of a shot with split-second timing using cloning and Layers in Photoshop.



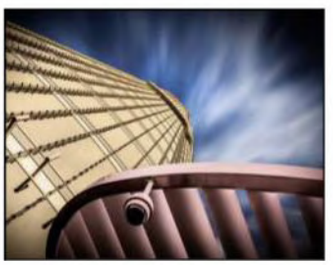
2 ALIEN BLOOMS
Use the powerful Liquify Filter in conjunction with Selections to give a sunflower a dramatic new look!



3 MAKE A PAINTING
Turn your photos into great looking fine-art watercolour images using a combination of Filters.



4 ELECTRIC PORTRAITS
Add filter-generated lightning bolts to create futuristic shots of friends & family with the 'wow' factor!



5 RECOLOUR BUILDINGS
Reinvent your architectural shots by adding streaking skies and applying custom colours with the Photo Filter.



6 BLUR BACKDROPS
Get the look of a high-end, fast aperture lens on portraits by digitally blurring your backgrounds.



7 FILTER GALLERY TIPS
Explore the workings of the Filter Gallery in Photoshop & Elements and stack filters to create striking effects.



8 LIGHTROOM SCENICS
Enhance the colour and contrast in landscape images direct from RAW files using Lightroom 5 or CC.



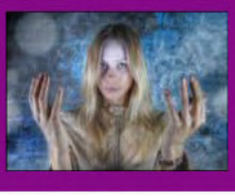
9 EXTREME SPORTS
Discover the art of extreme sports shooting with visionary Red Bull photographer, Olaf Pignataro.

Also on your amazing interactive disc this month...









START IMAGES
Use these files to practise the projects with your own software.

READER GALLERY
Inspiring pics from *Digital Photo* readers.





5 FREE BONUS TUTORIALS
Unlock the secrets of creative image-making with these essential extra techniques.


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Planet Photo

Your fresh fix of inspiration from the world's best photographers

Catch of the day



An entirely self-taught photographer, 25-year-old **Jacopo Rigotti** first encountered a kingfisher while out shooting in 2013. He was struck by its beautiful colours, but unfortunately scared the bird away. After looking at some kingfisher photography online, he decided he wanted to learn to shoot them for himself.

He started by building his own hide next to the river. In time, and with lots of practice, he learned to capture the kingfisher as it dived into the water and even as it emerged with its catch. This was a breakthrough, but Jacopo didn't stop there. For a truly breathtaking shot, he knew he'd need to capture the bird at the moment it made its catch. This meant shooting it underwater.

Two years later, Jacopo had learned a lot and had even constructed a water-resistant housing to allow him to submerge his camera. With all his preparations complete, Jacopo placed his gear in the water and attached a 10-metre remote shutter release cable to his camera. He then returned to the hide to watch and wait. The kingfisher dived several times, but each time Jacopo was unprepared and missed the shot. Just when he was beginning to think the window of opportunity had closed, the bird dived once more – and this time he was ready.

After the kingfisher had left the area, Jacopo retrieved his camera and immediately checked his shots to see what he had captured. He was greeted by the shot you see. It is the culmination of two years' worth of study, patience and practice – Jacopo's dream image.

Camera Nikon D3S & 24-120mm lens & SB24 flash **Exposure** 1/250sec @ f/16, ISO 200 **Software** Photoshop **Visit** 500px.com/jacoporigo





Vincent was gifted a burning red sunset when he made his helicopter ride over London.

Bird's eye view of London



Vincent Laforet is a pro photographer who's always searching for the next challenge. Having worked on commissions for *National Geographic*, *Vanity Fair* and *Sports Illustrated*, he also picked up a Pulitzer prize shooting for the *New York Times*. In 2008, Vincent diversified into video, shooting *Reverie*, the first widely available short film captured using the Canon EOS 5D MkII.

Vincent's latest project has seen him take his skills to the skies. The AIR project began in New York in 2014 and has seen the talented photographer shoot from a helicopter over some of the world's biggest cities. While aerial images are nothing new, Vincent's creative take on the genre has seen him built a portfolio of cityscape images that stand apart. The aim of the project is to demonstrate that the world isn't such a big place and that we're all a lot closer and more connected than we realise.

"When you're on the street looking up at the tall skyscrapers that fill our cities, you feel pretty small and sometimes quite insignificant," explains Vincent. "However, when you look at the same urban environment from above, you're able to see the scale of a city at a glance and see just how connected we all are. Altitude gives a different perspective on our relationship with one another and with our environment".

Shooting from a height of 7500ft requires the right kit, and Vincent teamed up with storage specialists G-Technology to ensure he kept the 5000 images shot on each 90-minute flight safe. Using a G-Drive he could transfer up to 750GB of image data in just 20 minutes. These creative aerial images don't happen easily, though, as for every one hour of shooting time, Vincent will spend ten hours editing.

To see more of Vincent's amazing photography, visit *www.laforetvisuals.com* and to learn more about the AIR project, visit *www.laforetair.com*

Camera Canon 1DX & 55mm Zeiss Otus lens
Exposure 1/400sec @ f/1.4, ISO 800 **Software** Photoshop

Get the shot

Aerial shots for every budget



1 DROMIDA OMINUS FPV £158

For under £160, he FPV offers up to 12 minutes of flying time, a Full HD camera and an extra set of blades. *www.dromida.com*



2 DJI PHANTOM2 £599

The mid-range drone carries a GoPro with 12Mp and has a maximum flying time of 25 mins.



3 3DR SOLO £979

Built to carry a GoPro, the Solo offers a long Wi-Fi range up to half a mile. *3Drobotics.com*



4 DJI INSPIRE £2380

One of DJI's more advanced drones, it offers a camera shooting 4K video or 12Mp stills. It has a landing gear system to keep the blades out of view. *www.dji.com*



Beno was granted early access to the Louvre Abu Dhabi, which is scheduled to open in 2016.

"A stunning viewpoint that few will ever enjoy"



Photographer Beno Saradzic took this shot inside an iconic Abu Dhabi landmark, and needed five separate exposures to get it...

Beno, first of all, let us congratulate you on a stunning image. Where was your shot taken?

I took it inside the Louvre Abu Dhabi. What you're looking at is the dome that arcs over the top of the structure. It was commissioned by Abu Dhabi's Tourism Development & Investment Company and consists of 7850 tessellated stars arranged in eight layers. These form a dome roof which was designed by Jean Nouvel. The idea is that it bathes the museum below in an ever-changing array of dappled light patterns, almost like a kaleidoscope, known as the 'Rain of Light'.

It's an amazing location. But isn't that roof a little bit close to the ground?

Yes, I suppose it would be if that were the ground! Actually, I was lucky enough to be granted access to the construction site. When I took the shot I was standing on a temporary platform that's around 25 metres above the atrium's floor. I was very lucky to be able to get that close to the 2000-ton dome, but getting my gear up there was extremely tough! If you were to go back there now you'd find this platform has already been removed. It was a stunning viewpoint that few will ever enjoy. However, I still recommend you go anyway to see the structure for yourself. It's something of an architectural marvel and is set to become Abu Dhabi's architectural pièce de résistance.

So, what camera settings did you use?

Shooting into the sun is not something I'd recommend, but beneath the Louvre's dome, that's exactly what I wanted to do. The range of shades, from dark shadows and super-bright highlights, resulted in an enormous dynamic range. No camera can capture all that in a single frame, so multiple exposures were needed. I took five shots between 1/160sec and 1/4sec at ISO 100. I used an aperture of f/5.6 and a focal length of 17mm. I then blended the shots together using Oloneo PhotoEngine, Lightroom and Photoshop.

How do you get the ideas for your shots?

I'd suggest looking for inspiration in a variety of places and not just in the world of still photography. For example, my work is influenced by cinematic masters such as David Lean and Stanley Kubrick. I appreciate their clean, masterful composition of each shot, which often involves symmetry and perfect lighting.

■ *Visit **500px.com/benosaradzic***



Cory used the wide end of his 24-70mm lens to capture this classic New York scene.

Creative composition

Pack the frame



Photographing an iconic city location is a challenge, but finding a composition that includes multiple landmarks in a single frame is even harder. Cory Schloss lined up his shot meticulously to capture three icons of New York in one image – Washington Street (1), the Manhattan Bridge (2) and the Empire State Building (3).

When capturing multiple subjects in one frame, using a wide focal length will help keep the zone of sharpness deep enough to ensure each landmark is in focus, from the closest to the most distant. Selecting a small aperture such as f/16 will also achieve this. The downside is, a small aperture will lengthen the shutter speed, so you may need a tripod.

Iconic alignment



New York native **Cory Schloss** has been taking photos since he was six years old. He started with a Kodak Disc camera and worked up to his current DSLR – a Canon EOS 70D. This image, which captures an amazing alignment of classic, Big Apple icons was taken while Cory and his wife were walking in the city. "Washington Street feels very much like the urban equivalent of the Grand Canyon, with grandiose red brick buildings lining both sides of the cobble-stone street and the iconic Manhattan Bridge looming ahead," explains Cory. "When we reached the intersection, I noticed if I moved into just the right position, which happened to be in the middle of the intersection, both the Empire State Building and the Manhattan Bridge came into perfect alignment."

Camera Canon EOS 70D & 24-70mm f2.8 lens **Exposure** 1/640sec @ f/4, ISO 100
Software Lightroom 5 **Web** *www.facebook.com/coryschlossimages*

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DAN MOLD

4k enables you to shoot at high frame rates (30 FPS) and then select one perfect frame that captures the moment.

What everyone's talking about

Is video the new photography?

Ever lined up a cracking photo opportunity only for your timing or the camera's slow frame rate to let you down? It could have been a once-in-a-lifetime composition, but after checking the back of the camera you realised you missed it by a split-second. This has been a bugbear of fast-action photographers for years, but recently introduced technology could be putting this problem to bed forever.

4K has been a major breakthrough of recent years. The format is found is cameras such as the Panasonic GH4 and Samsung NX1, and is more commonly associated with enabling photographers to record ultra high-quality video footage without the need of a bespoke video camera. But the 4K format can also be used effectively to record stills.

Essentially the technology works like this. The photographer presses the shutter and the camera records much like it performs in movie mode. However, from this ultra-fast frame rate, images can be extracted and used as standalone stills.

In the case of the Panasonic G7 (used to capture the image above), the stills have a resolution of 8 megapixels and it will record at 30 frames per second. When you compare this to Canon's flagship 1DX (a maximum frame rate of 14fps) or Nikon's D4s, which offers 11fps, it becomes clear how this technology ensures you won't miss that special moment.

While 4K dramatically increases a photographer's chances of bagging the perfect moment, it also raises other questions. Some would argue that by covering an entire action sequence in a long burst and picking the best frame later, it lessens the art involved in capturing a great shot. Is 4K a technological evolution showing the future of action photography, or the end of a well-crafted art? We'd love to hear your views, so tell us what you think at *www.facebook.com/digitalphotouk*

Gear to make it happen

Four ways to shoot 4K



1 GOPRO HERO3+ £200
The popular action camera is dust, water and shock proof, but you can't change focal lengths by switching lenses.



2 PANASONIC G7 £679
Packed with features including a 16Mp sensor, touchscreen LCD and built-in Wi-Fi. Plus there are a variety of lenses available – from wide-angle to telezoom.



3 SAMSUNG GALAXY S5 £380
Packing a 16Mp CMOS sensor, the S5 allows you to shoot in 4K, browse the web and then phone for a pizza once you've captured the moment!



3 SONY A7RII £1244 **Sony's latest full-frame mirrorless, the A7RII, has a massive 42.4 MP back-illuminated CMOS sensor, Wi-Fi and can film 4K movie footage. Read more about the A7 RII on page 114.**

dp1
Quattro
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19mm (28mm) F2.8

dp2
Quattro
Standard
30mm (45mm) F2.8

dp3
Quattro
Mid-tele
50mm (75mm) F2.8

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Pushing the limits

Walking the line

Laying on a small rock formation inches away from the edge of a waterfall that plummets down over half a kilometre may not be everyone's idea of a relaxing day's photography. But for **Sebastian Wahlhuetter**, it's par for the course.

Shot in Yosemite Valley during a commission for Adidas, the athlete on the distant slackline is Lukas Irmler. Lukas is a professional highliner and Sebastian knew he had to do something special to capture the moment. "I took the image from a rock formation in the river. The main challenge of this project was more a logistical one," he explains. "I ran up to the shooting point (900 metres from ground level) several days in a row and every time I had to carry a 15kg backpack of photo and climbing gear.

"I had this image in mind and in order to take it, I just laid flat on my belly, right above the waterline to get this unique perspective."

Camera Canon EOS 5D MkII & 24-70mm f/2.8 lens
Exposure 1/800sec @ f/3.5 ISO 100 **Software** Lightroom 5
Visit *www.wahlhuetter.net*

Mountain views to shoot today

The UK isn't short of stunning mountains for you to line up in front of your lens. Here's four of the best you can shoot easily from the roadside.



MATTY GRAHAM

BUACHAILLE ETIVE - SCOTLAND

With the River Etive's iconic waterfalls providing foreground interest, the Buachaille is within spitting distance of the A82, just past Glencoe's Ski Centre.



JON ADAMS

LANGDALE PIKES - ENGLAND

This great Lake District view is found close by the minor road south east of Elterwater, not far from the A593.



JON ADAMS

PEN YR OLEU WEN - WALES

This little-known gem can be taken yards from the minor road that's accessed through a gate in the Ogwen Cottage car park. It's very close to the main A5 that links London to Holyhead.



ALAMY

TRYFAN - NORTH WALES

Only a mile up the A5 from the previous shot, this stately peak has an amazing east face, so get there for the morning light. Parking laybys are in abundance.



Behind the scenes

Waves in the sky



Photographer **Julien Bacal** shares the story behind a recent landscape shoot in California. "Mount Tamalpais is a real paradise for me. Almost every overcast weekend in San Francisco creates amazing conditions at Mt Tam," explains Julien. "As the fog reaches the mountains, you just have to wait for the right light to get the perfect shot." Julien turned the rolling fog into waves in the sky by capturing a long exposure. He did this by securing his Canon EOS 5D MkIII to a tripod to ensure it wouldn't move mid-shot and introduce blur into the picture. A 4-stop ND filter was placed over the lens to reduce the ambient light levels. This extended the shutter speed to 10secs, and Julien chose to work in Manual mode to precisely balance the exposure. Once autofocus was achieved, Julien switched to Manual Focus mode to lock the focus distance in place.

"Every time I visit Mount Tam, I feel like I get an even better shot," Julien tells us. The French photographer prefers to be on location early, and this determination has led to him turning hire cars into makeshift motorhomes so he can wake up, roll out of his sleeping bag and be ready to shoot!

Camera Canon EOS 5D Mark III & 70-200mm lens **Exposure** 10 seconds @ f/18, ISO 100 **Software** Photoshop **Visit** julien-bacal.com

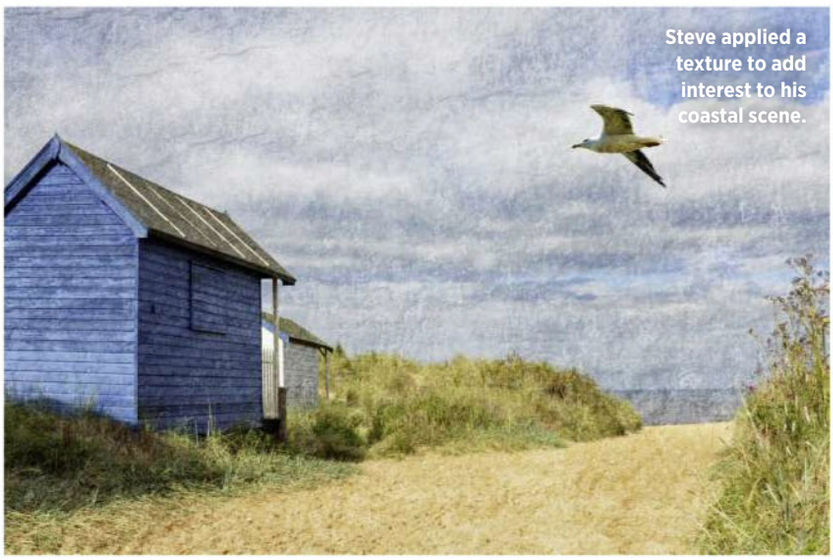


Julien had to set his alarm clock for 4am to be up early enough to catch the morning mist rolling over Mount Tamalpais, which has an elevation of 2574ft.



It works for me!

Show us what you've been doing with *Digital Photo*'s creative techniques & win great Lexar prizes! Send your best shots to us at **dpimages@bauermedia.co.uk**



Steve applied a texture to add interest to his coastal scene.

PATH TO THE SEA
by Steve Richardson



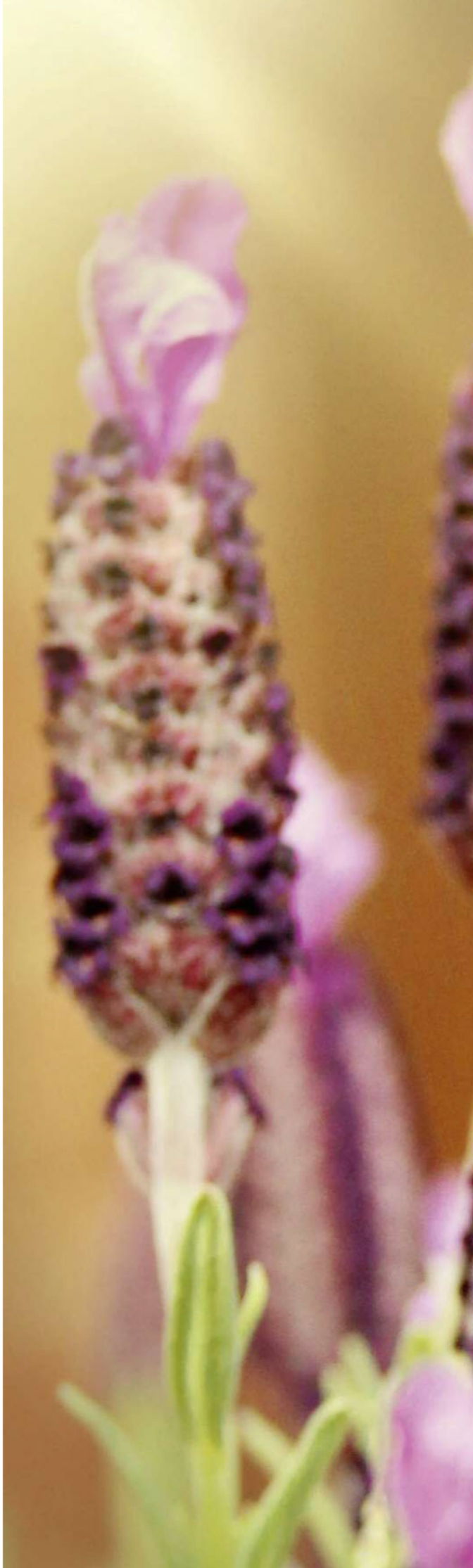
From: Colchester, Essex
Tell us about your image: This shot was taken at Old Hunstanton in Norfolk using my Nikon D90 and 18-105mm lens. The path acts as a lead-in line, inviting the viewer to walk barefoot on the warm sand towards the sea! Firstly I cropped the image and straightened the scene in Elements 11 before adding a seagull for the full beach effect.

Then I turned to the 'Use your free texture pack' technique in the June 2015 issue. I chose Texture 06 from the 99 free files supplied, which fittingly was taken from a seaside rock.

ORIGINAL PIC



I blended the texture with my image using the Overlay Blending Mode, and reduced the Opacity to 45% for a more subtle effect. To tone-down the effect further over key areas in the image, I added a Layer Mask and painted over those parts with brush set to 20% Opacity.





Lens flare gave a warm summer glow to Paul's lavender shot.

EARLY BUZZ HOUR
by Paul Fernandez



From: Stechford, Birmingham
Tell us about your image: I took a nature walk one sunny Saturday and found this pretty lavender plant buzzing with bees. I took a few shots with my Canon EOS 70D and 18-50mm lens. Although the colours were bright and the sun had thrown some nice light onto the scene, I felt it lacked punch and could be improved.

Seeing the 'Create a new look with flare' in the May 2015 issue gave me the inspiration – and the tools – to add some drama to my image. I chose one of the files from the *Lens Flare FX* supplied with the magazine and pasted it into my image, rotating the flare to position it in the top-left corner. When it was correctly placed, I blended the flare with my lavender and bee using the Screen Blending Mode, so that only the brightest parts of the flare image were showing through. Then I used Free Transform mode to adjust the size of the flare to suit my image for the final, sun-drenched look.

ORIGINAL PIC



CITADEL COURTYARD
by Steve Scarlett



From: Hailsham, East Sussex
Tell us about your image: My wife and I have just returned from a three-month tour of Europe in a campervan – five countries, five capitals and 8510 miles! I took my Canon EOS 600D, four lenses, my laptop with Elements 11 and a number of *Digital Photo* magazines.

On the day in question, a brief spell of sunshine appeared between heavy rain showers and I took this shot of the Blaye Citadel in the South of France. The original image wasn't at all inspiring in JPEG form, so I followed the 'Turn pics into paintings – fast!' technique in the January 2015 issue to add some much-needed 'art' to the scene.

I created some duplicate Layers and added the Cutout and Bas Relief Artistic filters from the Filter Gallery to separate Layers, adjusting the settings on each until the brush strokes appeared realistic.

ORIGINAL PIC



The original image lacked punchy colours and artistic flair.



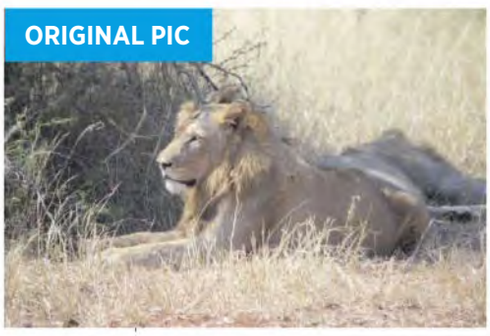
AFTER THE HUNT
by Bill Churchley



From: Fareham, Hampshire
Tell us about your image: I raided my photo collection to find this image as I knew it would lend itself brilliantly to the 'Turn pictures into paintings' technique from the May 2012 issue of *Digital Photo*. I spotted it when looking through some older copies of the magazine. I had tried out the tutorial on a town scene before, but this was my first attempt with an animal. The hippo and giraffe didn't quite make the cut!

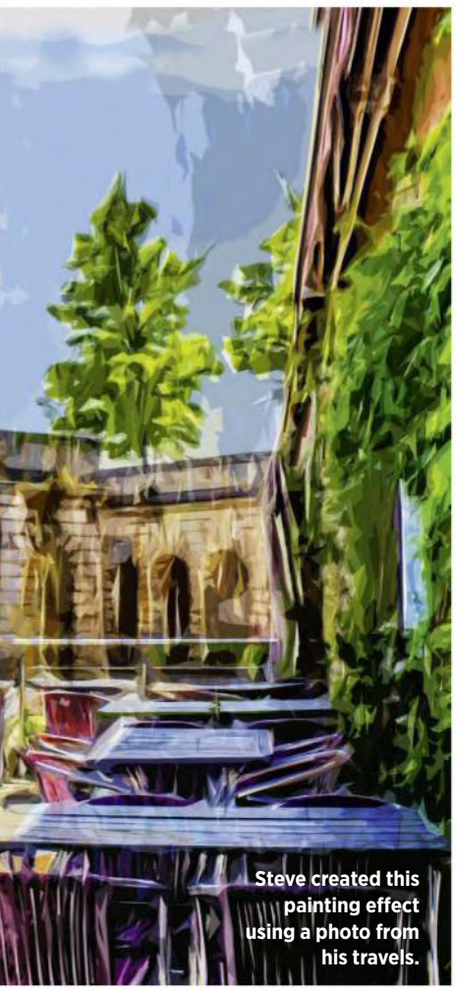
The original shot was taken with my Nikon D3200 and 70-300mm telephoto lens – I didn't want to get too close to this lion! I started by applying a sketch effect with the Smart Blur filter before adding the paint effect overlay supplied with the magazine. I blended this with my image using the Multiply Blending Mode. Then I added the painted background template and blended it seamlessly with my pic using Blending Modes for some added texture. Painting over the edges of the image to fade them slightly with a white brush gave the perfect painterly finish.

ORIGINAL PIC



Using a technique and templates from a 2012 issue of DP, Bill transformed his safari shot.





Steve created this painting effect using a photo from his travels.



Bill turned his lion image into an artistic painting.

DRAG STRIP
by David Somerville



From: Harlow, Essex
Tell us about your image: During a day out at a drag racing event, I took several pictures with my Canon EOS 600D.

The colours of the cars and bikes on the day were striking, but when I looked at the shots on my computer at home I was disappointed that they didn't seem to have much of an impact. Then I remembered seeing a *Digital Doctor* transformation in the January 2015 issue where a busy shot of some cyclists was improved with a colour-popping technique. So I loaded my shot up in Elements 10, boosted the Saturation, cropped in on the car and made a duplicate Layer. I converted this new Layer to black & white and then added a Layer Mask before painting over the car using the Brush tool to bring through colour on the Layer beneath.

To finish off, I boosted the contrast on the black & white Layer for a bit more impact.

ORIGINAL PIC





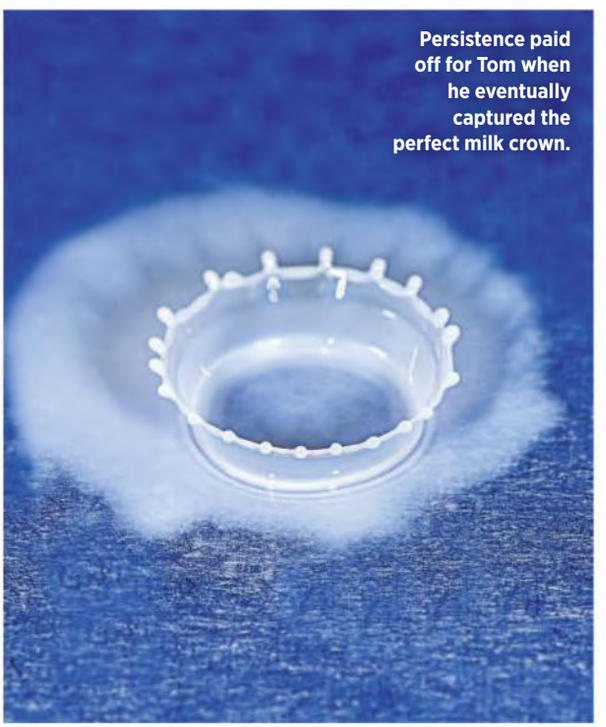
MILK SPLASH
by Tom Bianchi



From: New York, USA
Tell us about your image: Inspired by your 'Shoot a striking liquid abstract' article in the June 2015 issue, I tried my hand at capturing an image of a drop of milk perfectly frozen in time.

I carefully positioned up my Nikon D800 and Sigma 105mm macro lens on a tripod in front of a blue backdrop. With my scene set, I dripped milk onto the paper, attempting to fire the shutter at the right moment to capture the splash, freezing it with the help of macro flashes and a remote flash.

After innumerable attempts, my persistence paid off with this final image of a perfect milk crown. It was captured with a shutter speed of 1/320sec and at an aperture of f/16.
I processed it in Lightroom 6 and Photoshop CS6, where I cleaned up the stray splashes, cropped, sharpened and tweaked the **Levels** to achieve a full range of tones. Capturing a moment that the human eye can't see is the reason I'm drawn to macro photography!



Persistence paid off for Tom when he eventually captured the perfect milk crown.

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GREAT MAGAZINES.CO.UK

Beautiful high-impact macro images can be captured with gear that costs far less than you'd think.

Make it BIG

Capture pro quality close-ups with low-budget camera kit

MACRO PHOTOGRAPHY MAKES THE ORDINARY, EXTRAORDINARY. By getting a close-up view, everyday subjects take on a new lease of life and can be turned into fantastic images. From slices of fruit to colourful flowers, and from garden bugs to household items, going in close reveals exquisite detail. It shows off a whole new world that's richly photogenic yet goes unnoticed by the unaided eye.

Many think close-up imagery can only be achieved with a macro lens, which can be a sizeable investment. But great images can be bagged on a far more humble budget. What's more, the space you need to shoot close-ups is as modest as the items you capture, so this makes macro something you can do anywhere. Now turn the page, and get inspired into action!

Master macro with our expert advice



FLIP YOUR LENS FOR LOW-COST MACRO SHOTS *P28*



GET FRESH CLOSE-UPS IN THE COMFORT OF YOUR HOME *P30*



CAPTURE NATURE'S BEAUTY IN THE HEART OF A ROSE *P32*



MUST-SHOOT MACRO IDEAS TO TRY RIGHT NOW! *P34*

ISTOCK



Go macro for free! Just flip your lens backwards

TECHNIQUE & PICS BY DAN MOLD

YOU ALREADY HAVE everything you need to shoot amazing close-up images. All you have to do is take the lens off your camera and shoot through it the wrong way round. This 'reversing' technique is the perfect introduction to macro, as it's free. But while it will work with any lens, there are a few things that'll help you get the best results.

The most important thing is to take care of your lens when holding it the wrong way round – you don't want to scratch the elements. Once you've tried the technique, it's a good idea to use an older 50mm prime lens – it doesn't matter if it's for a different camera type and has the wrong mount, as you'll be shooting through it backwards. Holding the lens in place isn't the most elegant solution, so a reversing ring to attach it is a smart option that frees up your hands (see panel).

Another reason to use an old lens is it's likely to have a physical aperture ring that you can rotate to let more or less light through. Modern lenses open or close their apertures automatically when removed from the camera, so using a manual lenses give much more control.

1 Set up your background

Have a rummage in your garden for a slow moving insect you can use as your subject. Ladybirds are a great option because they're vibrant and easy to shoot. When you've found one, gently move it onto a clean leaf. For a zingy shot, place a sheet of coloured paper behind it. We chose a bright blue sheet of card to give the impression of a perfect sky on a summer's day.



2 Add some tiny water droplets

Water droplets bejewel macro shots and look fantastic under a macro lens. But, for a tiny subject you need tiny droplets – those from a standard spray are too large. Atomising sprays such as those on perfume bottles release a fine mist ideal for macro droplets. Empty atomisers can be picked up at online auction sites for just a few pounds. Fill one up with ordinary tap water so you don't harm your critter and gently give it a few sprays.





Shoot with your lens on the wrong way round for stunning macro shots like this one!



MONEY SAVER
Use a reversing ring for a low-cost option

By shooting through a reversed lens you'll be able to take top quality macro shots. But although you can handhold a lens in front of your camera's mount, it's much easier to compose when your lens is fixed in place. A reversing ring is the solution. These cost from just a few pounds on auction sites and screw into the front filter thread of the lens. The other side fits on your camera's lens mount.

Check the filter thread size of the lens you intend to reverse (it's usually stated on the underside of the lens cap), and buy a reversing ring in this size.

An old, manual focus, 50mm prime lens with a physical aperture ring is also a good optic to search for secondhand. Because you'll be using it backwards, it doesn't matter what make it is, so bargains are easy to find.

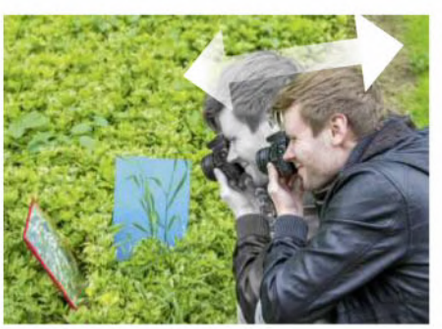


3 Use a reflector for extra light



To inject some attractive catchlights in the water drops, use the white or silver side of a reflector to bounce extra light onto your subject. This will improve the look of the shot and help you shoot at faster shutter speeds. If you don't have a reflector you can easily make your own very cheaply. See page 50 for the full details. Once you've found the best angle to bounce the light, you can prop it in place to free up your hands.

4 Take the pic



Mount your lens in reverse and put your DSLR into its Manual mode. Set the ISO to Auto and select a shutter speed of 1/100sec. You'll be able to see your depth-of-field when looking through the viewfinder, so turn the aperture ring until you have the level of sharpness you like. To focus, put your eye to the viewfinder and rock the camera and lens combination back and forth until your subject is sharp – when it is take the shot and check the exposure and sharpness on your LCD screen.

Fill frames with close-up filters

TECHNIQUE & PICS
BY MATTY GRAHAM

ONE OF THE GREAT BENEFITS of shooting macro images is that it allows you to fill the frame with your subjects. This is important, because if you can't get close enough, you end up cropping in, and this means you are losing precious pixels. With fewer pixels in the pic, image quality is compromised, and you're no longer getting the best out of your camera.

Although dedicated macro lenses will fill the frame nicely, there's a more affordable way to capture similar results. Close-up filters start at around £10 and screw into any lens with the same-sized filter thread. They work just like a magnifying glass, and if you buy them in a set, you can use them singly or stacked to get more or less magnification.

A perfect project to try with close-up filters is a frame-filling shot of backlit, sliced fruit. All you need is a light source to shine from behind the subject, and anything from natural daylight to a desklamp will do.

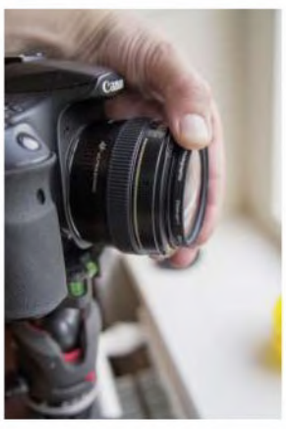
1 Prepare your subject

Slice up a kiwi or any citrus fruit, taking care to keep the sliced portion thin and consistent. Keeping it thin allows light to pass through, and keeping it the same thickness throughout allows the light to do so evenly. Place the slice on a clear CD case – it's juices should stick it in place – and you can backlight it with anything from a desklamp to a window. We taped it to a window to use bright daylight.



2 Add your close-up filter

If you have a UV or skylight filter in place on your lens, unscrew it in an anti-clockwise direction to remove it. Now screw your close-up filter into place. To avoid cross-threading, try gently turning it the **wrong** way (anti-clockwise) first, to get the threads to engage. Once it's sitting level, gently screw it clockwise until it meets resistance. You don't need to over-tighten it. Place your camera on a tripod so you can keep it still.





Close-up filters are simple to use and work like a magnifying glass over your lens



MONEY SAVER
Get the macro look with a close-up filter

You may already have a screw-in UV filter on your lens to protect the front element. Close-up filters (also called macro filters or dioptres) look the same, but contain a glass lens that magnifies the subject. They screw into the filter thread, and come in different sizes and strengths. Unlike some close-up accessories, they can be used as normal with a camera's autofocus and metering system.

Close-up filters are best bought as a set, and because they're lightweight and compact, they're a great alternative to heavier, bulkier extra lenses. *Digital Photo* is running an exclusive reader offer on a set of SRB close-up filters, so flick to page 110 to find out more.



30% OFF CLOSE-UP FILTERS!
SEE P110

3 Dial in your settings

Set the main mode to Aperture priority (A or Av on the mode dial). Select an aperture of f/5.6 and make sure the ISO is at its lowest value (usually 100) to get the best quality. The camera will select the appropriate shutter speed to deliver a well-exposed image. Even with the close-up filter on the lens, the camera will still be able to focus, so frame up on the fruit and half press the shutter to focus.



4 Add more filters

If the subject isn't magnified sufficiently to fill the frame and achieve sharp focus with one close-up filter, remove it and use a stronger filter. Alternatively, you can screw a second filter directly on top of the first to increase the magnification. Refocus to get the subject sharp, then press the shutter all the way home to take the shot.





Capture the beauty of nature with an arty abstract floral

TECHNIQUE & PICS BY DAN MOLD

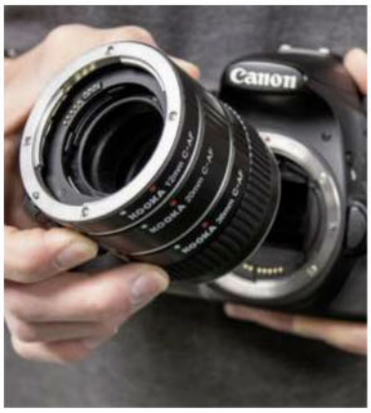
TAKE A CLOSER LOOK AT nature and you'll discover it's absolutely packed with strong shapes and interesting lines. A closed rosebud is the perfect subject for a fine-art floral. Its tightly-bunched petals create a fantastic swirl that guides the eye directly to the heart of the rose.

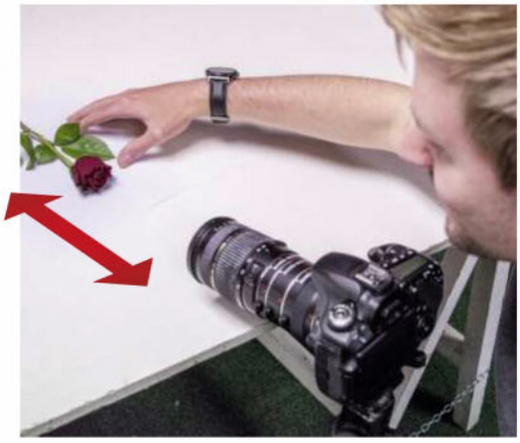
As with any macro picture, focusing is critical. So, in this technique you'll learn how to pin-point your focus using just a sheet of A4 paper. This contrast-rich, vibrant still-life can be shot indoors on a tabletop, whatever the weather. You don't need an elaborate flash setup to achieve dramatic, moody lighting – all you need is a small torch or even the LED light on your smartphone!

1 Attach your extension tubes

Take the lens off your DSLR and attach some Auto extension tubes to the camera's lens mount. Extension tubes usually come in a set of three. For this technique you want the maximum macro effect, so leave all three stacked together. Now mount your lens on the front of the tubes – it can be any lens from a kit lens to a 50mm prime.

Lay your rose flat on a sheet of A4 paper on a tabletop. It doesn't matter if you have an untidy background, you'll be focusing so close that it won't appear in the frame. Attach your DSLR to a tripod and adjust the legs so that the lens is roughly the same height as the flower head.





2 Manually focus on your subject the smart way

Put your camera into its Live View mode so that you can compose the shot on screen. Switch your lens to its Manual Focus setting and rotate the focusing ring until the rose is fairly sharp. To achieve precise focus, move the sheet of A4 back and forth until the heart of the rose is pin-sharp on screen. This is much easier than moving the camera closer and you can even hit the Zoom button on your camera to magnify the Live View image for highly accurate focus.

3 Achieve studio lighting with a smartphone

Turn off the room lights in your makeshift studio and direct the light from a small torch or a smartphone from one side of your flower. Sidelighting will give dramatic shadows and depth to the subject, so move the light around until your shot looks good. When you're happy, prop the torch or phone in place to free up your hands.





4 Set up your camera correctly

Put your DSLR into its Aperture priority mode (A or Av mode) and set an aperture of f/16 and an ISO of 100. Depth-of-field is very shallow when shooting macro, so this small aperture will still blur the foreground petals. You're likely to get a very slow shutter speed of around 1sec, so switch on the 2secs Self-timer. This will avoid you jogging the camera at the moment of exposure. Now take the shot and check it for sharpness on screen.

MONEY SAVER
Use a set of auto extension tubes

Extension tubes are designed to make lenses focus closer than intended. They do this by moving the optics of the lens further away from the sensor. This allows you to shoot dramatic macro images, but when they're fitted you'll no longer be able to focus on infinity. Extension tubes usually come in a set of three different lengths, and these can be mixed and matched to produce different amounts of extension. One end of the tube attaches to your camera mount, and your lens fits on the other.

Cheap tubes can be bought for about £15 but these lack the electrical contacts to communicate with the camera. It's worth paying more for an Auto set (from around £50) as these maintain normal operation.

Extension tubes are mounted between the camera and lens and make the lens focus closer.



Big ideas with small subjects

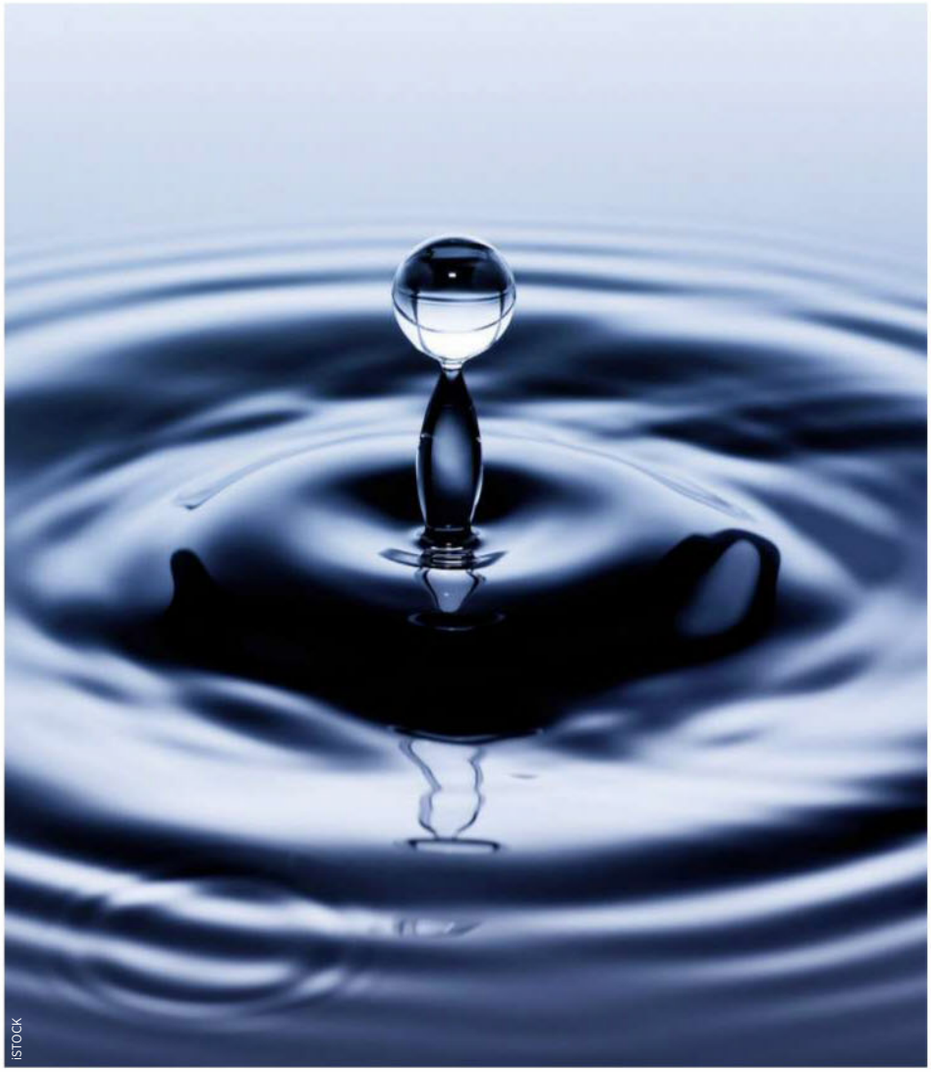
Shooting close-ups opens the door to a vast range of creative images. Here's a set of fantastic subjects you can shoot without straying far from home...



MATTY GRAHAM

DETAILS ON THE DRIVEWAY

There's a great macro shot to be had with whatever's sitting on your driveway. Capture the curvy lines of badges, wing mirror details or chrome grilles.
TRY Aperture priority @ f/5.6, ISO 200


iSTOCK

MAKE A SPLASH WITH WATER DROPS

Fill a glass dish with water and place it on a kitchen worktop. Position a chair above the dish and tape a water-filled plastic bag to the chair so it is hanging over the dish. Use a safety pin to poke a hole in the bag so you have consistent drips. Set up your camera on a tripod and put a pencil in the dish where the drips are falling. Focus on this, then use off-camera flash to freeze the splash.
TRY Manual mode, off-camera flash, 1/200sec @ f/11, ISO 100


iSTOCK

KEEP AN EYE ON YOUR SUBJECT

The trick to capturing a super sharp iris image is to make sure your subject doesn't move around. That's easier said than done, so ask your subject to lay down on the floor to restrict movement and then set up the tripod just above their head. It may feel a little awkward, but with the subject static, this allows you to focus really accurately. If you have a reflector to hand, use one – it will create an attractive catch light. **TRY** 1/250sec @ f/2.8, ISO 200


iSTOCK

FOOD FOR THOUGHT

Use some black card or the black side of a reflector to form a DIY studio background that will help your red chilli subjects pop out of the frame with rich colour.
TRY 1/80sec @ f/2.8, ISO 400



SHOOT THE INTERNALS OF A WATCH

A pocket watch is packed with detail, just pop open the rear casing and you'll find all sorts of interesting mechanics and cogs. All you have to do is use a wide aperture to isolate them.

TRY Aperture priority @ f/4, ISO 400



COAT LIPS WITH CONFECTIONARY

Ask your model to wear some lip gloss then coat their lips with sugar or cake decorations. Place desklamps either side for even lighting and fill the frame with the lips.

TRY Manual mode, 1/250sec @ f/11, ISO 100



GO ABSTRACT WITH OIL AND WATER

Position a glass of water over some paper with a graduated colour. Add a few drops of cooking oil, give it a stir and wait for the mixture to settle. Focus on the edges of the oil bubbles.

TRY Aperture priority @ f/11, ISO 100



CAPTURE TEXTURE IN NATURE

Take a woodland wander, and find some mushrooms. Get down to their height with a tripod and place some kitchen foil underneath them to bounce light upwards.

TRY 1/100sec @ f/4, ISO 800



SPRAY WATER DROPS ON A GARDEN LEAF

Use a small paintbrush to place some water droplets on a good looking leaf in your garden. Use a reflector or off-camera flash to light the subject, then focus and take the shot.

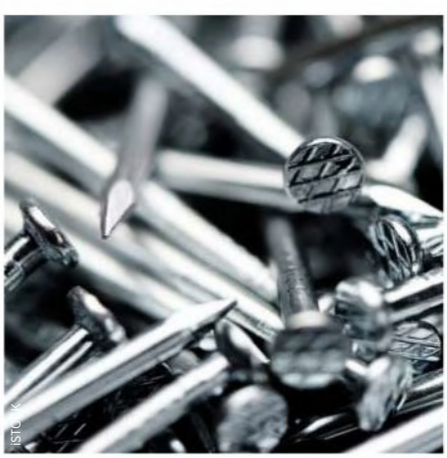
TRY 1/100sec @ f/8, ISO 800



ARRANGE COLOURFUL PENCILS IN A CIRCLE

Position a vibrant assortment of pencils with their points converging on a white sheet of paper. Focus precisely on the pencil you want to appear the most sharp, and shoot.

TRY 1/100sec @ f/5.6, ISO 400



NAIL THE DETAIL

Spread out a pile of nails next to a window to capture their intricate detail in even light. Banish harsh light by pulling a net curtain across the window to act as a diffuser.

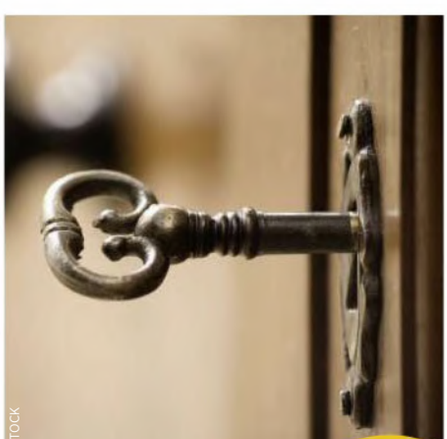
TRY 1/100sec @ f/2.8, ISO 400



GET STRAIGHT TO THE POINT WITH COLOURS

Find subjects that feature contrasting colours. A dartboard's red and green areas will stand out surrounded by black and white. Cover up any dart holes using Photoshop's Clone tool.

TRY Aperture priority @ f/4, ISO 400



KEY ELEMENTS

Old keys boast intricate designs that will be revealed when magnified under a macro lens.

TRY 1/200sec @ f/8, ISO 400

MACRO LENSES TESTED *p119*



Required kit

DSLR OR CSC
Any camera with manual focus and exposure compensation is fine.



TRIPOD
Your camera has to stay still if you want to jump into the shot and pose!

CREATE A CARD FLICK TRICK SHOT!

Blur the line between what's real what's not with our in-depth guide to shooting a magical photo

WORDS & PICS BY ANDY HEATHER



BELIEVE IT OR NOT, SHOOTING THIS mystifying image isn't about perfect timing and remote shutter releases; it actually relies on a combination of careful composition, camera mastery and post-production knowhow. That's why half of this project is devoted to shooting the seemingly impossible card toss and the other half is all about how best to edit what you've captured.

Would you believe me if I told you that the card on the right-hand side isn't a composite element? It was shot live and in-camera! All that was required was to fix it in position and to use the right camera settings to make it stand out. No studio, no assistant – just a living room and a barbecue skewer! The other cards were added later in Photoshop. Arranging them live would have been time-consuming and potentially limiting. By adding them in software, I was able to adjust the composition until everything was where I wanted it.

A vital part of the process was shooting in RAW. Shooting in JPEG means relinquishing control of how your pictures look to the engineer who programmed your camera. And they have no idea what kind of shot you're attempting! By using RAW you can take control of the entire creative process from start to finish. Equally essential was a tripod and the camera's Self-timer mode, because I was acting as both photographer and model. To see how the whole project was completed and create your own impossibly-timed card trick, turn the page to follow the easy step-by-step...

TECHNIQUE STEP-BY-STEP GUIDE OVER THE PAGE

Set up and shoot your card flick image

This is a high-key image, so you'll need to shoot in front of a window. Cover the window with blinds or sheets so no distracting objects are visible behind the model. You want the card to be the main focus, but the figure should be partially visible, so a medium aperture will be best. As you're shooting toward the window, you'll need plenty of light on your subject to ensure they're not silhouetted. We used Christmas lights to supplement the standard indoor lighting for this shot.

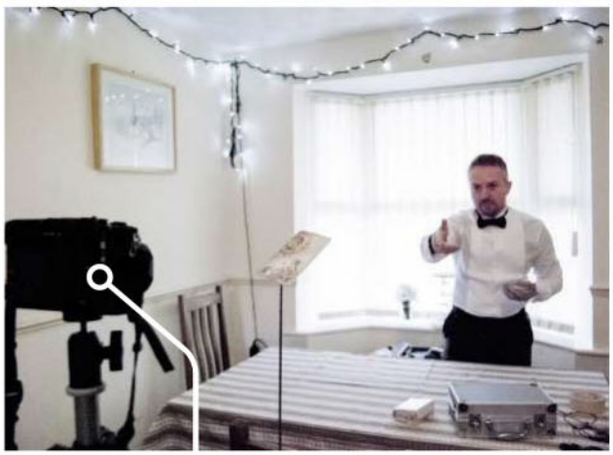


PLAYING CARD

Regular playing cards are iconic and graphically striking, but we used tarot cards, allowing their intricate designs to add interest to the shot.

KNITTING NEEDLE OR SKEWER

Stick your card to a skewer or knitting needle with a loop of tape. This will be easy to clone out.



TRIPOD-MOUNTED CAMERA

By placing your camera on a tripod, you can be meticulous with your composition and focusing, plus you'll be able to take a self-portrait.



1 Set up your camera on a tripod and get your props into position

Place your camera on a tripod and establish the position where your model (which could be you) is going to stand. Attach a thin rod such as a skewer, knitting needle or bamboo cane to a chair between the camera and the model's position with some masking tape. Stick your card to the end of the skewer with a loop of tape and angle it so that it looks dramatic in the frame. Make sure it is well illuminated as the card is the main focal point of the image. If it's a little dark, use a desk lamp to shine a little extra light onto it. For your model, think about the costume too; a magician-style bow tie and dress shirt will help your viewer to instantly understand what's happening in the shot.



2 Dial in the camera settings to get a well-balanced exposure

It's always best to shoot in RAW mode as this will give you the best possible image quality. It will also give you greater leeway for pulling extra highlight and shadow detail out of the shot when editing. Set your camera to Aperture priority mode (A or Av on the Mode dial) and set an aperture value of f/8. This will give a sufficient zone of sharp focus to keep the card sharp and clear without excessively blurring the model. As you're shooting into the light, your camera is likely to underexpose the model. To compensate for this, hold down the Exposure Compensation button (denoted by a +/- icon) and dial in +1. If the model's still too dark, you can increase this further as necessary until they are clearly visible. Increase the ISO value until you achieve a shutter speed of 1/60sec. This will ensure that even if your model moves a little, they won't be too blurred in the final image.

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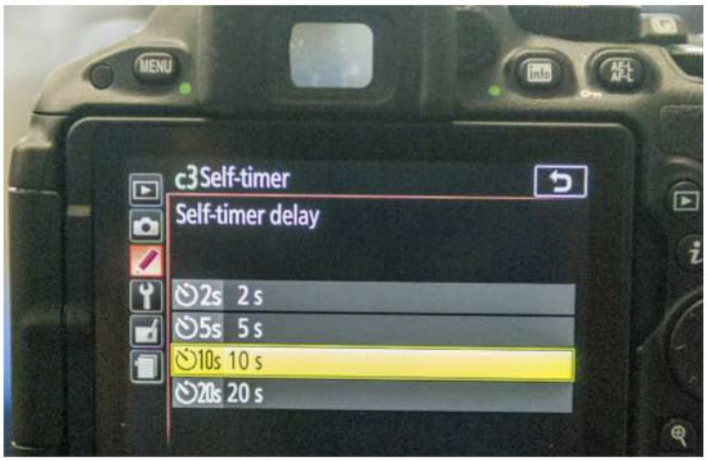
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All rights reserved. Photographer: Marc Krause. *Not valid with other discounts or offers.



3 Position the props and set your point of focus

Move the chair and skewer so the card is large and prominent in the frame. In the viewfinder, place the active AF point over the card and half-press the shutter button to set the focus at this distance. With the card sharp, switch your camera or lens to its Manual Focus (MF) setting. This will lock the focus distance so it won't wander. Provided your card is close enough to the camera, your aperture setting of f/8 will isolate the card in its own band of sharpness, allowing more distant detail to fall off into a diffused blur. The magician in the background will still be recognisable though, so the context will remain intact.



4 Activate your camera's Self-timer and take the shot

Set your camera's Drive mode to the Self-timer setting and in the menu, dial in a delay of 10secs. If you're using yourself as the model, this will give you ample time to get into position after you've pressed the shutter button. Now gently press the shutter, and quickly get into position for a test shot. Once the camera has taken it, inspect the image on screen and ensure the magician isn't being obscured by the card. Make any adjustments to the position of the subject, and put a mark on the floor for each test shot so you know where you should be standing. When you've got everything just right, take the final shot and you'll have the raw ingredients for the post-processing phase.

Shoot in RAW format to give you the best quality and the greatest flexibility

Using your camera's RAW format gives you the chance to adjust the contrast, colour and exposure of your images after you've taken them. These adjustments are all carried out in specialist RAW conversion software. If you have Photoshop, Elements or Lightroom you have all you need as a RAW converter is already built in.

When you open a RAW file into Photoshop or Elements, Adobe Camera Raw will launch and present your picture in an interface that offers lots of options. Although Photoshop and Lightroom offer more RAW features than Elements, certain core components are shared, and any of these programmes has the power to tease more dynamic range, more detail and more colour out of your RAW files.

In many ways, a RAW file can be thought of as an unrefined mound of clay. Your job is to make something beautiful out of it by sculpting it, and this is done by using the adjustment sliders in the software while watching the preview to see the improvements they make.

For this shot, the unadjusted RAW showed an underexposed figure and a colour balance that was too warm. To fix this, the **Exposure** slider in the **Basic** panel was increased to **+0.60**. This brought out a good level of detail in the defocused magician and the sharp card. The **Shadows** slider was then boosted to **+50** to brighten the darker tones, and the **Highlights** slider was reduced to **-50** to compress the brightest areas. To address the overly warm tones, the **Temp** slider was pulled to the left until the whites and colours looked neutral.

The settings will be different for your own shots, but don't worry about playing with the RAW sliders. The adjustments are all non-destructive and never have any impact on the original RAW file. You can't cause any damage to this, as it is stored separately to the adjustment settings.



A SMALL **LOGO** MAKES A BIG **DIFFERENCE**

5 CONTINENTS **28** MAGAZINES **40** AWARDS



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PERFECT YOUR CARD TRICK IN PHOTOSHOP

Clean up your shot with the Clone Stamp tool to create the 'flying card' illusion, and add extra cards to make the finished image even more dynamic. It's all easy to do in Photoshop or Elements...

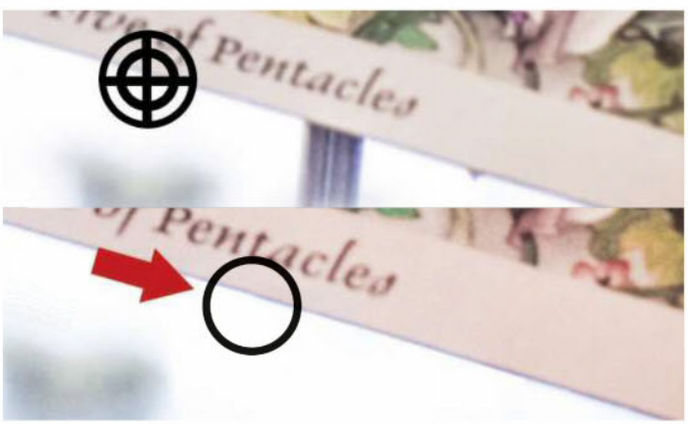
VIDEO LESSON ON THE CD





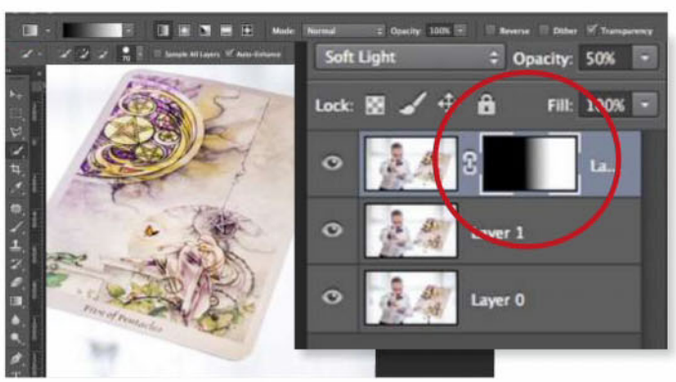
Open the start image and clone/crop out unwanted elements

1 Open *Card Flick.jpg* from the Start Images folder. It's best not to edit your **Background** Layer, so hit **Ctrl+J** to duplicate it. First, fix the distracting or untidy elements. Activate the **Crop tool** (**C**) and drag out a crop marquee to create a rectangular frame that loses the window sill and the lower edge of the net curtain. Move the top handle down until the magician's eye sits on the intersection of the top and left-hand third lines. Next, it's time to remove the distracting blind cords in the background on the left and right. Select the **Clone Stamp tool** (**S**), then hold down the **Alt** key and click on a 'clean' area you can use to cover the blind cords. This is your 'source' point, and needs to be as close as possible to the target area in terms of colour and brightness. When cloning out the blind cord on the left-hand side of the shot, **Alt-click** on the bright area directly below it, then release **Alt** and paint over the unwanted area to remove it from the image.



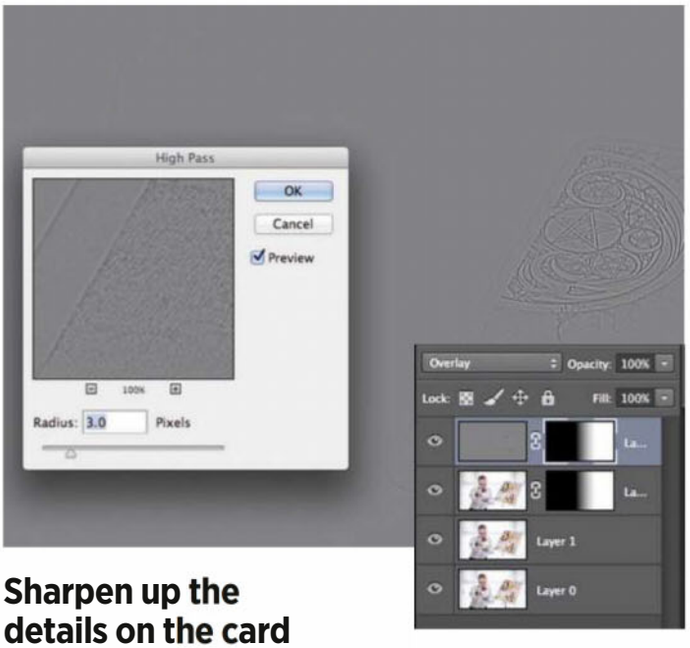
Clone out the supporting skewer to allow the card to 'float' in space

2 When it comes to removing the skewer, start at the bottom by using the same technique as on the last step – **Alt-click** on a bright area of net curtain adjacent to it, and then release **Alt** and paint over the bottom of the skewer. For the top end of the skewer – where it meets the card – you'll need to use a clean part of the card's edge. To do this, **Alt-click** on the edge of the card to the left or right of the skewer. Your brush needs to be small enough not to take in the text printed on the card, so use the left square brackets key to reduce its size. As you move your cursor over the skewered area, you'll see a live preview of the source superimposed over the target. Carefully move your mouse until the edge of the card lines up perfectly, then click and drag to paint over the skewer to hide it. Use the same technique to repair the edge of the card, to the right of the skewer, so you have a perfect-looking card dominating the scene.



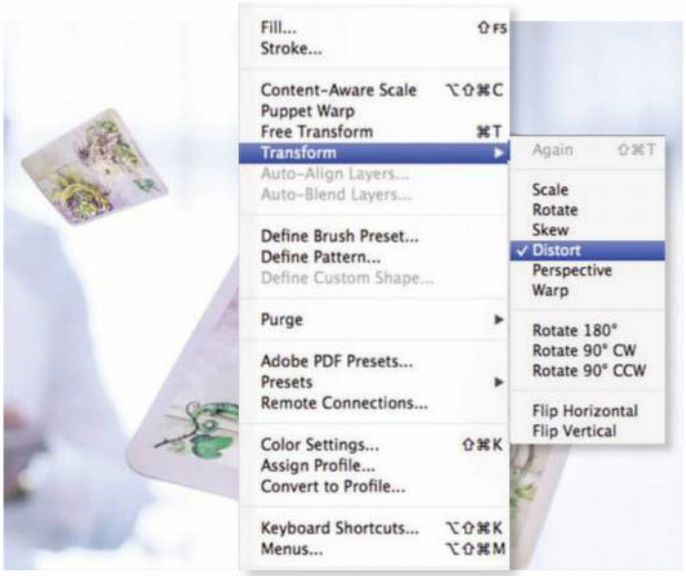
Make the card 'pop' and add a Layer Mask

3 You want the viewer's eye to go to the card first, so it needs to look as dynamic as possible. To enhance it, duplicate the Layer again (**Ctrl+J**), then in the Layers palette, click where it says **Normal** and change the Blending Mode to **Soft Light** and reduce the **Opacity** to **50%**. This gives a contrast boost to the Layer, making the card 'pop'. Unfortunately, it also adds the same changes to the magician in the background, and this isn't required. To address this, click the **Add Layer Mask** icon to add a Layer Mask to the **Soft Light** Layer, then select the **Gradient tool** from the Toolbox (you can do this quickly by hitting **G**). Hit **D** to reset the foreground and background colours to their default values of black and white. In the Tool Options bar, make sure the **Gradient tool** is set to the **Foreground to Background** and **Linear** options, then drag and release the mouse to draw a black-to-white gradient from the left to the right of the image. The black portion should cover the magician, so the **Soft Light** effect you've created with the Blending Mode change will be removed from the magician and will only be applied to the card.



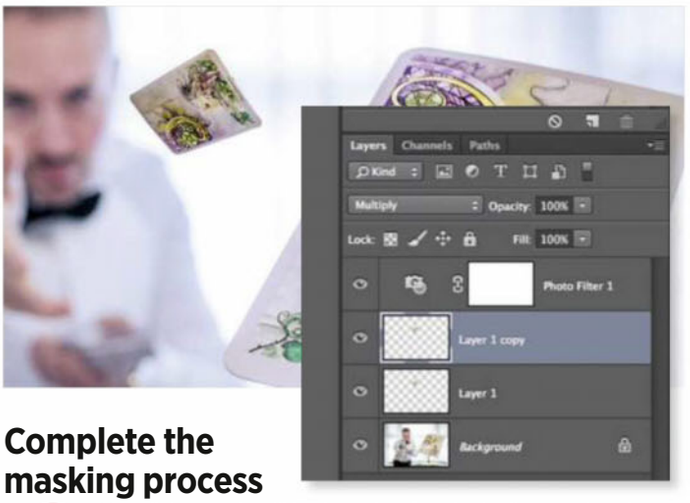
Sharpen up the details on the card

4 To further enhance the quality of the card, you can sharpen the detail in its design. Sharpening works by increasing the contrast on hard edges in the picture, and the **High Pass** method is great for controlling the effect with precision. To use it, select the top Layer in the stack and hit **Shift+Ctrl+Alt+E** to merge all the visible Layers into a new Layer. Next, go to **Filter→Other→High Pass**. In the dialogue box, drag the slider until you see the card's details emerge in the grey preview, but not so much that you introduce halos. For the example image, a setting of **3px** was appropriate. Click **OK**, then change the Layer's Blending Mode to **Overlay** to see the sharpening effect. You don't want the blurred magician to be any sharper though, so create a Layer Mask and draw a linear gradient on it as you did in the last step.



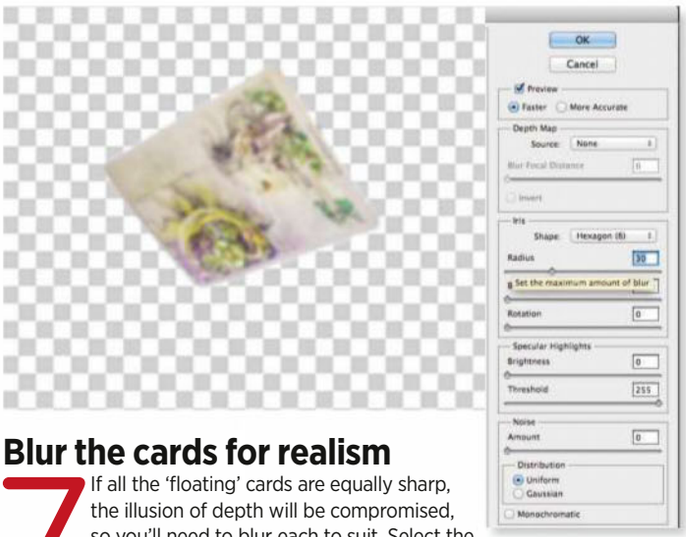
Comp in some more cards to fill the scene

5 Leaving a single flying card in the scene looks good, but for an even more striking composition, you can add more cards to fill the frame. To do this go to **File→Open** and open *Card Flick (extra cards).jpg* from the Start Images folder. With the image on screen, select the **Quick Selection tool** (**W**) and click inside one of the cards until it is selected. Feather the Selection slightly by going to **Select→Feather** (**Select→Modify→Feather** in Photoshop). Use a **Feather Radius** of **0.3px**. Hit **Ctrl+C** to copy the selected area, then go back to *Card Flick.jpg* and paste in the new card by pressing **Ctrl+V**. To make it look like it's spinning through the air, go to **Image→Transform→Distort** (**Edit→Transform→Distort** in Photoshop) and drag the handles to alter the perspective. Hit **Return** when you're done. Repeat this process with the remaining two cards – selecting, pasting and transforming them, so each is a different size.



Complete the masking process

6 Your flying cards will be face-down, so logic dictates that the face of the card would be cast into shadow. You can take care of that in Photoshop by duplicating the card Layer (**Ctrl+J**) and changing the new Layer's Blending Mode to **Multiply**. This will darken the card, making it look like it's all in shadow. However, that's a little unrealistic, as a flat surface with a window behind it wouldn't be evenly lit. To make this look more realistic, add a Layer Mask by clicking the **Add Layer Mask** icon. With a soft, black brush (**B**), click once on the card to apply black to the Mask and hide the shadow on the window side of the card. Leave the side nearest the camera dark, as that's furthest from the light source. Do this for all the cards, and if one of them looks too dark, you can reduce the **Opacity** of the Layer to tone down the darkening effect. When each card is looking natural, merge each card Layer with its corresponding shadow layer by highlighting both with **Ctrl-click** and then hitting **Ctrl+E**.



Blur the cards for realism

7 If all the 'floating' cards are equally sharp, the illusion of depth will be compromised, so you'll need to blur each to suit. Select the Layer of the card that's furthest from the lens (the smallest one) and go to **Filter→Blur→Lens Blur**. With the dialogue box on screen, hold **Alt** and the **Cancel** button will turn into a **Reset** button. Click it to reset all the sliders, then set the **Radius** to **30** and click **OK**. In the same way, set the **Radius** of the middle card to **20** and the closest card to **10**. Each card should look natural – if one looks wrong, undo the blur (**Ctrl+Z**) and try again with a different **Radius** until it looks right. With your project complete, it's time to save your image and give it a new name. To do that, go to **File→Save As...** and type in a new title. Use the **Photoshop** (**PSD**) format to keep your Layers intact for further editing in the future. If you plan to share your shot or email it to friends and family, use the **JPEG** format instead. This will merge the Layers and compress the image to give a much smaller file size.



MASTER YOUR CAMERA

Every month, we explore a key feature found on creative cameras like DSLRs or CSCs, and reveal what it does and how you can use it to boost your skills



SHUTTER SPEED

TECHNIQUE & PICS BY BEN DAVIS

AT ITS VERY CORE, photography can be reduced to a product of light and time. These interdependent variables are found in the DNA of every single image, which is why when you master your camera to control these factors, it puts creative power firmly in your hands.

The best way to govern both light and time is by taking control of your camera's shutter speed, which determines the length of the exposure. You can do this by switching your camera's main mode dial to its Shutter Priority mode, indicated by the S or Tv icon. This is the first step towards unlocking the most creative tool your camera has to offer.

The creative benefit of shutter speed is to decide how movement is captured in a shot

What is shutter speed?

The shutter speed is defined by the amount of time your camera's sensor is exposed to the light in your scene. Inside your camera there's a moveable 'curtain', which opens and closes to let in light for as long as you dictate. The longer the shutter speed is, the more light is let through to reach the sensor.

Shutter speeds are usually given as a fraction of a second, like 1/1000sec, 1/125sec, or 1/5sec – or sometimes the duration is longer – and is displayed as 2secs, 10secs or 30secs. Most DSLRs and CSCs allow the shutter speed to be set at various points between 1/8000sec and 30secs, and offer around 55 different shutter speed options. Many also have a 'Bulb' setting, which keeps the curtain open for as long as the shutter button is pressed. This setting is usually reserved for those rare occasions – like shooting at night – when a shutter speed in excess of 30secs is required.



Your shutter speed is displayed in seconds, either as a fraction or a whole number.

What is it used for?

The creative benefit of controlling the shutter speed is you get to determine how movement is recorded in a shot. If you want to 'freeze' motion – so anything moving is captured with sharp, solid edges – you need to use a fast shutter speed. Just how fast depends on the speed of the moving subject. A bursting balloon requires a quicker exposure time than a leisurely pedestrian, if you want them both to be held equally sharp. Using a fast shutter speed to capture quick-moving subjects provides an insight into a world usually off-limits to the human eye. Sports action, birds in flight and splashing water droplets all reveal their hidden detail.

A shutter speed too slow to capture sharp detail in a moving subject results with it being recorded as a blur. Just how blurred depends on the selected shutter speed and the velocity of the moving subject. Choosing to shoot with an intentionally slow shutter speed will transform anything moving into an artistic fuzz.

This is a popular choice for landscape photographers, as flowing water and drifting clouds become attractive smears of light.

Taking control of your shutter speed setting



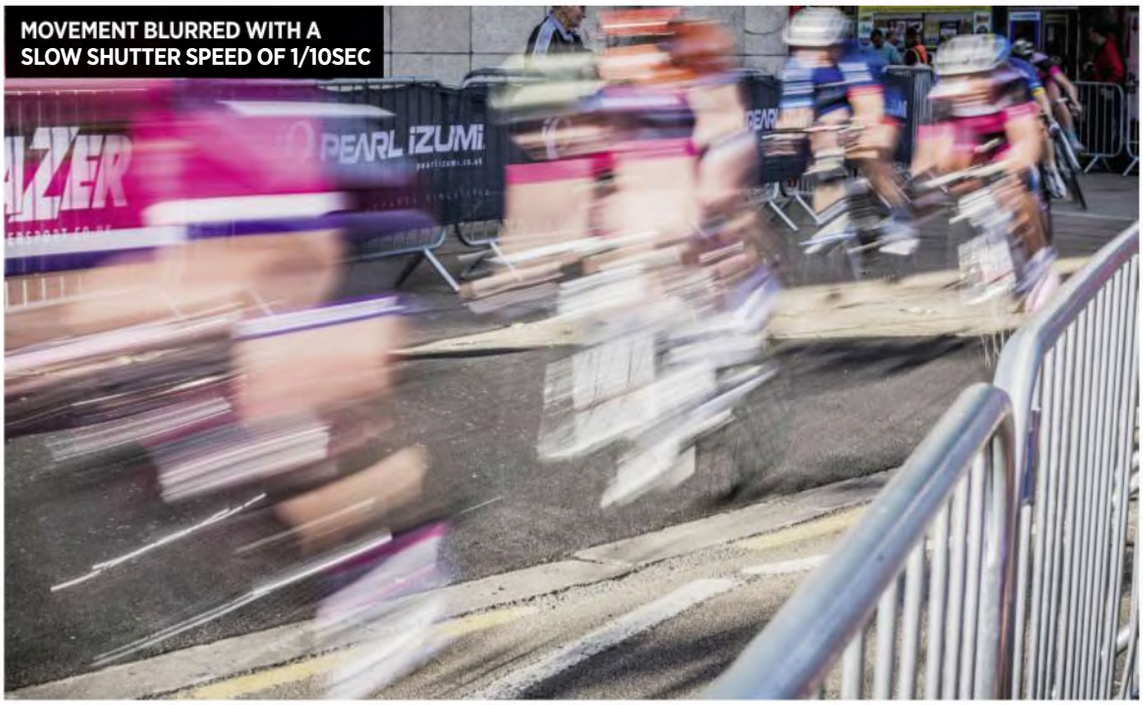
Shutter Priority mode is accessed through the main mode dial.

Once you've switched your mode dial to the S (Nikon, Sony) or Tv (Canon, Pentax) position, you're now in control of the shutter speed. To adjust it, most DSLRs and CSCs have a rotating command dial near where your thumb rests, while others can be controlled with the touchscreen. The selected shutter speed value is displayed in the viewfinder, so you can keep your eyes on the scene, and often on the rear LCD too. Your camera will decide what aperture value is required to achieve a good, well-balanced exposure, leaving you free to concentrate on getting creative.

You can't set any shutter speed you like, though. The range of shutter speeds you can set – before you under or overexpose your image – is determined by the amount of light in the scene, and the maximum and minimum aperture settings of the lens being used.



ACTION FROZEN WITH A FAST SHUTTER SPEED OF 1/4000SEC



MOVEMENT BLURRED WITH A SLOW SHUTTER SPEED OF 1/10SEC

The effect of shutter speed on movement



Deciding how movement in your scene is captured is one of the most creative decisions you can take with your photography. The faster a shutter speed is, the more chance you have of 'freezing' your subject mid-action. Doing this brings an almost science-like quality to your images, with a forensic level of detail. When you slow your shutter speed down, you increase the likelihood of capturing motion blur. This can be a great tool to convey the passing of time, or to inject added drama into a scene. The shutter speed required to achieve either effect is entirely dependent on the speed of the subject. There's no magic formula to memorise, so the solution is to experiment.

UNLEASH THE CREATIVE POTENTIAL OF YOUR CAMERA'S SHUTTER SPEED SETTINGS



1/8000 SEC



1/500 SEC



1/125 SEC



10 SECS

Shutter speed and camera shake

A common problem that all photographers encounter is camera shake, and it's one of the more likely reasons that a picture will be deleted. It gives subjects and scenes a ghosted, double edge, making your shots soft and blurry. Camera shake occurs when the camera moves during the exposure, and it's this 'dragging' across the scene which renders detail as a blur. You're more at risk from shake when using slower shutter speeds – as the camera has more time to move, or longer focal lengths – as any movement is magnified.

One way to beat the blur of camera shake is to keep your camera as steady as possible during the exposure. To guarantee the sharpest results, you'll need to use a tripod. If you use the thickest legs first, avoid extending the centre column and weigh it all down with your camera bag, your tripod will be as secure as it can possibly be. Setting a 2secs Self-timer will also rule out the chance of transferring vibrations to the camera when you press the shutter button.

If using a tripod isn't an option then you need to make sure you're holding the camera correctly to keep everything stable. Your left hand should always be supporting the barrel of the lens, with your right hand firmly around the finger grip. Keep your elbows tucked into your ribs, and stand with your feet shoulder-width apart, to cut down on sway. Resting your weight on a wall or lamppost will further increase your chances of getting a sharp shot.

Another way to avoid camera shake is to use a faster shutter speed. The shorter the exposure time, the less chance there is of the camera moving during the shot. But how fast is fast enough? There's a simple formula you can follow to stay free of shake, and that's to keep your shutter speed value faster than the focal length setting. So if you were shooting at 200mm, you would need to set your shutter speed faster than 1/200sec. Stray below that and any movement from your hands could be recorded as blur.

One way to beat the blur of camera shake is a faster shutter speed

This rule covers full-frame cameras, but many DSLRs and CSCs use smaller sensors, which make focal lengths appear longer. How much longer is stated in the crop factor, so you'd need to multiply your shutter speed by this to get an accurate figure. 200mm is equivalent to 300mm on APS-C DSLRs, so a shutter speed faster than 1/300sec is needed to avoid blur.



Camera shake makes pics look fuzzy, but beating the blur is easy if you know how.

Image stabilisation

Many cameras offer Image Stabilisation systems which are designed to reduce the effects of camera shake. They allow the camera to be handheld up to 4-stops slower than would otherwise be possible without encountering blur.

Some manufacturers favour lens-based Image Stabilisation systems, which use a floating element within the optics. Others employ sensor-based systems, meaning the chip itself is moved by tiny motors to compensate for camera movement.



3 ways to get a faster shutter speed

If your shutter speed value says 'lo' or the aperture is blinking on-screen, then it means there's not enough light available to get a good exposure at your chosen shutter speed. To get around this you need to let more light into your camera.

One way is to increase your ISO setting. This electronically makes the imaging chip more sensitive to light. Every time the ISO number doubles, your camera becomes twice as sensitive to light, meaning a shorter shutter speed would be required.

If increasing the ISO isn't an option, you can use a wider aperture, which will let more light through the lens. This is denoted by a lower f/number. Your lens may already be at its maximum setting though, so the only way to go wider is to invest in a 'fast' lens with an ultra-wide aperture like f/1.8.

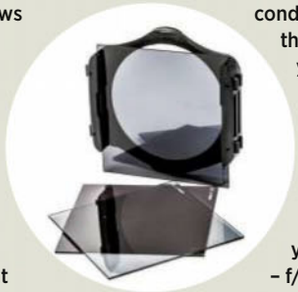
Your final option is to get more light onto your subject, by repositioning it if that's possible, by adding extra light with a flash or by waiting for the environmental conditions at the scene to brighten.



Increasing the ISO value makes a camera more sensitive to light, allowing a faster shutter speed to be used.

How to extend your exposure time to capture artistic blur

Using a slow shutter speed allows you to capture artistic motion blur effects. But sometimes there's too much light for your camera to handle, so images become over-exposed. You'll know before you shoot as your aperture value will be blinking or displaying 'hi'. To still create these attractive effects in bright conditions, you need to reduce the amount of light entering your camera.



Make sure your ISO is at its lowest setting (usually 100). This makes your chip less sensitive to light, allowing for longer shutter speeds.

You'll also need to be using your minimum aperture setting – f/22 on most lenses – so the lens is letting the least amount of light through. Your camera will do this automatically in Shutter Priority mode.

To extend your shutter speed further, you'll need to use a Neutral Density (ND) filter in front of the lens. They act like sunglasses, reducing the amount of light passing through, and are available in different 'stops', or strengths. Remember, you'll always need to use a tripod when using slower shutter speeds.

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Peter Hawk, advertising photographer

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X-T10

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Getting creative with your shutter speed

Controlling the appearance of motion is one of the most fulfilling aspects of photography. It's quick and easy to do, and mastering the process will give a real boost to your shooting skills!



1 Set up your shot

Choose a moving subject that you think would look fantastic with tack-sharp detail, but also equally interesting as a creative blur. This perhaps could be rushing water, a passing train or cyclists in a race. For moving subjects, you need to focus with your Continuous AF mode. This is AF-C on Nikon or AI Servo on Canon, and keeps the camera focusing while the shutter button is half-pressed. Place your active AF point over the part of the image you want held sharpest. Frame up, bearing in mind that compositions work better when there is space in front of a subject for them to move in to.



2 Shoot at your fastest shutter speed

Now set your main mode dial to Shutter priority (S or Tv). Rotate your command dial until you've set your camera's fastest shutter speed. This will be at least 1/4000sec. Take a look at the exposure indicator bar on your camera's screen – the needle should be in the middle. If it isn't, there's not enough light and your shot will be underexposed. Increase your ISO until your camera can get a balanced exposure, indicated by the needle returning to the middle of the bar. Once you've done this, take the shot. Zoom in on the screen check detail has been captured sharply.



3 Shoot at your slowest shutter speed

To access your camera's slowest available shutter speed, you need to set your camera's sensitivity to it's lowest setting. This is ISO 100 on most DSLRs and CSCs. It means more light is needed for a balanced exposure, thus forcing the shutter to stay open for longer. Rotate the command dial until you've set the slowest shutter speed possible. Your maximum aperture will begin to 'blink or display 'hi' if the shutter speed is too slow, so increase it until the exposure display returns to normal. Depending on your lens and the light conditions, you should be able to access shutter speeds of at least 1/10secs without overexposing the scene.

When using shutter speeds this slow, it's best to use a tripod or you'll introduce camera shake to your pics. Once you've taken the shot, zoom in to check your main subject appears as an energetic blur, and static items remain pin-sharp.

Once you've run this easy exercise, think about the shutter speed value you use on every shot you take. Decide what your shot is about, and whether you'd like the movement to be frozen solid, or captured as a creative blur.



You know just the shot you're looking for.

We know the camera you should be looking at.



When you roam far and wide, you meet remarkable characters in extraordinary places. That's when you want a versatile compact system camera in your pocket. We'd look for a 24 megapixel sensor with built-in WiFi, in a body tough enough to take anywhere. Which makes the Sony A6000 your ideal travelling companion.

Currys PC World

WE START WITH YOU

BUILD A DIY REFLECTOR

Make your own top-class photo kit for next to nothing!

REFLECTORS ARE INDISPENSABLE accessories for photographers. They come in all shapes and sizes, and allow you to sculpt the light falling on your subject by redirecting it. Whether it's the sun, a desklamp, a flashgun or a torch, most of the shots we take are lit by a single light source. By using a reflector, you can bounce some light from your main source into the shaded side of the subject and reduce contrast in the picture. How you position and angle the reflector will change the way the light falls, and the material used for the reflective surface will alter the character of the shot.

Reflectors are readily available from all good photo stores and websites, and some of the most useful are circular collapsible models that fold down for easy storage. Portable models vary in size from 30cm to 120cm in diameter and come in different colour finishes, but with prices ranging from around £12 to £75, it's a lot to pay out if you're not sure of the benefits.

The good news is, reflectors are easy to make cheaply from materials you probably already have around the house. While homemade variants won't be as robust nor as long-lasting as a shop-bought equivalent, they will give you the same, professional quality photographs.





You will need

- 1x cardboard sheet
- 1x pair of scissors
- 1x roll of tin foil
- 1x roll of sellotape
- 1x roll of electrical tape
- 1x sheet of white copier paper

Time needed: 10mins

Four simple steps to a home-made reflector



1 Find a piece of stiff cardboard

Find a piece of cardboard that's the size you want your reflector to be. For many table-top still-life shots, an A4 size is fine. For portrait use, a size of at least A3 is better. You can chop larger sheets of card down to size with scissors, and any relatively stiff material will work, from the side of a cereal packet to a cardboard packaging box. Ideally, pick something fairly rigid as you'll want it to keep its shape when holding it with one hand.



2 Create your low-cost 'silver' side

Unroll some tin foil so it's a little larger than the size you require. Once you've done this, cut it to length, and then gently scrunch it into a loose ball. Carefully open it out again, and you'll be left with a mottled surface. This will ensure that the light it reflects is diffused, rather than giving a mirror finish. Press it down flat. If the foil isn't wide enough to cover your surface, unroll another piece so you have enough.



3 Tape the tin foil in place

Stick some double-sided tape all the way around the outer edges of your board. For larger A3 sized reflectors, run a strip down the middle as well. If you don't have any double-sided tape handy, simply place loops of regular tape around the edge. Now, line up your foil and press it onto the card, then trim off the edges with your scissors.



4 Add the finishing touches

For an alternative reflector surface, stick white paper to the other side of the board. Use some Pritt Stick, Blu-tack or clear tape to attach it. Trim off any excess around the edges, and for a tidy finish, run a line of electrical or Gaffa tape all the way around the edge – this will protect the edges and increase the lifespan of your home-spun reflector.

Using your reflector

A3 reflectors are perfect for portraits, and smaller A4 variants are ideal for any still-life pictures you shoot at home. They'll give your shots a pro standard, and the total cost is no more than a pound or two. You can attach your home-made reflector to a tripod or lightstand, hold it with one hand or even ask your model to hold it just out of frame if you're shooting a portrait.

Whatever you're shooting, make sure the main light source is coming from behind, then use your reflector to bounce gentle light back onto your subject to fill the shadows. Don't forget to try both sides of your reflector, as they'll create different effects.



PUT A NEW SPIN ON ICONIC LANDMARKS

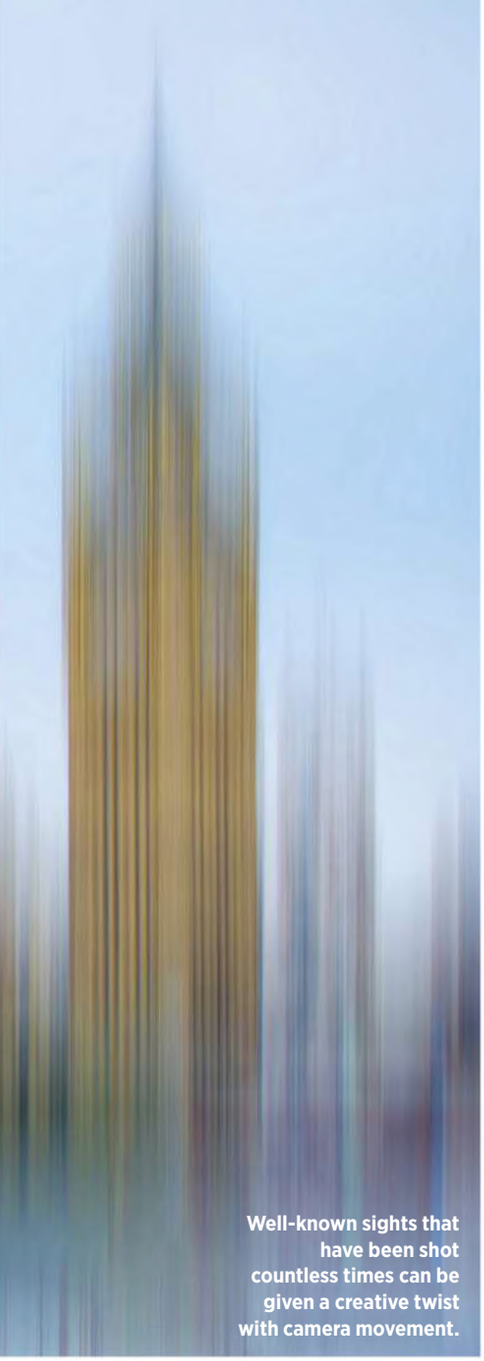
TECHNIQUE & PIC BY DAN MOLD

TAKING A CREATIVE SHOT OF A famous landmark is a tough challenge. From the Statue of Liberty to the Leaning Tower of Pisa, and from the Eiffel Tower to the Houses of Parliament, iconic sights and subjects have been snapped hundreds of thousands of times. The question is, how do you make your shot stand out from the crowd?

A moving-camera technique may not be the first idea that springs to mind, as a soft, streaky shot will be the result. But when a subject is so well known, its structure and form will break through the intentional blur, giving a striking image with a painterly feel that's truly creative.

Popular with sports photographers, panning shots usually consist of tracking a fast-moving subject on the horizontal axis. This technique uses a similar movement, but tilts the camera on the vertical axis while the shutter is open. The vertical lines of the subject become abstract streaks, and your viewer is left to pick out the shape of your impressionist artwork.





Well-known sights that have been shot countless times can be given a creative twist with camera movement.



How to transform landmarks into an arty blur

Set up your camera



1 Set your camera to its Shutter priority mode (S or TV) and make sure the ISO is at its lowest value. Choose single point AF mode, then position the active AF point over your famous landmark and half-press the shutter to focus. Now lock the focus so it doesn't change by switching the camera body and/or lens to its MF setting. To begin, choose a shutter speed of 1/10sec.

Tilt as you take the pic



2 Frame up above your subject then tilt down, firing the shutter as your subject is in frame. Continue tilting down smoothly and you'll hear the shutter end the exposure. It'll take a few attempts to tilt at the right speed. Using a tripod with a pan and tilt head makes it a little easier to get a smooth movement, but persevere and you'll soon get a good take.

Check the pic on screen



3 There's an element of trial and error involved in this technique, so check your shot on the camera's screen. Make sure it's well-exposed and that the whole building is in the frame. If there's not enough blur, use a longer shutter speed of 1/5sec, or make your tilting movement faster. If there's too much blur, use a shorter shutter speed of 1/30sec, or slow down your tilt.

WHY THIS SHOT WORKS



Discover the elements that make **Yuliy Vasilev's** summer landscape image work so successfully

WORDS BY ANDY HEATHER



A COMPOSITIONAL TRIANGLES
Yuliy's image is organised around compositional triangles. The viewer's eye moves from the flowers in the foreground, up the channel between the rows of poppies, then left along the horizon to the sunset and back to the foreground. Guiding the viewer's eye in this way keep them engaged with the image. Even better, when you lay Golden Triangles over the image, as above, you find the rows of poppies correspond perfectly.

B TIME OF DAY
Most photographers capturing natural light landscapes recommend shooting during the 'Golden Hour'. This is the period of time shortly after sunrise or before sunset when the light cast long shadows and is warmer and softer than at midday. The benefits of waiting for the right light are clear in Yuliy's shot: the low-angled vestiges of dying sunlight backlight the poppies to create rich, vibrant colours and sumptuous contrast.

C USE OF LEAD-IN LINES
The rows of poppies and the channel between them form converging lines that lead the eye towards the 'vanishing point' on the horizon. This gives a great sense of depth to the shot. Also, the lead-in line is situated a third of the way from the right-hand edge of the frame, which is related to the next point...

D THE RULE OF THIRDS
Although triangles form the dominant compositional tool employed by Yuliy in the image, it's worth noting that due consideration has been given to the Rule of Thirds as well. The horizon, for example, has been placed roughly a third of the way from the top of the frame, and as mentioned, the channel through the poppy field is one-third of the way in from the right. This creates a stronger composition than placing elements centrally.





Camera Sony NEX-C3 & 8-55mm f/3.5-5.6 lens @ 22mm
Exposure 1/125sec @ f/22, ISO 200
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1 BOX OF MATCHES, 3 PHOTOGRAPHERS. WHAT WOULD YOU SHOOT?

Take our creative challenge today!

WHEN VISITING NEW places, our eyes are alert to the fresh sights around us. In the more familiar environments we experience every day, though, inspiration can prove much harder to come by. This happens because we stop looking at the world with wonder.

To keep their senses on alert and stay constantly inspired, some photographers take a conceptual route and create an image in their head before picking up the camera. Others wander out, camera in hand, and wait for something to catch their eye.

Whether your ideas come from inside or outside your head, one thing's for sure – taking on a narrow and limited brief will always challenge your thinking and get your creative juices flowing.

Some people say that if you want to take better photographs, you should try standing in front of more interesting things. However, not everyone has the luxury of travelling the world and shooting exotic subjects. Creative photography can turn any subject into a great shot, and that means items that wouldn't normally be considered photogenic can serve up excellent photo opportunities. By limiting yourself to less-obvious subjects, you'll work your creative and technical muscles much harder. Before long, you'll start to envisage shots that had never before entered your head. The good news is, if you can create a great shot from a subject you wouldn't normally bother with, you'll train your eye to see picture opportunities wherever you go.

We challenged the *Digital Photo* team to push their creativity with a tough brief centred on a single subject. They were allowed to use any camera or lens to get their shots, and with Photoshop being just as vital in crafting a good image as a camera, post-processing was both allowed and actively encouraged!

This month's subject

Three members of the *Digital Photo* team were asked to come up with a successful shot from a very humdrum subject – a standard box of matches!

Have a look at what they've done and read about how they did it, then see if you can do better!



Inflame your imagination with an everyday subject like a box of matches, and you'll be in for some striking pictures!

Discover how all these images were created



SHOT 1 ANDY'S STRIKING MOMENT



SHOT 2 DAN'S MINIATURE HEROES



SHOT 3 MATTY'S PARTY PORTRAIT



Fire in darkness makes for a striking image – two shots blended together made this flower of flames.

SHOT 1

Andy creates an illuminating shot with a high speed burst of pics

I WAS DELIGHTED WHEN I HEARD that this month's subject was a box of matches. The shapes made by flame and smoke are some of nature's most compelling aesthetic treats. My mind was racing as I considered the possibilities! Should I try to capture the graceful wisps of smoke from an extinguished match? The team knows me as the type of photographer who likes to use Photoshop extensively to create multi-layered composites, so perhaps, I thought, I should manipulate the smoke into a series of ethereal shapes.

After a little consideration I realised that I had never seen the instant of a match's ignition being captured. I was really intrigued to find out what that might look like. I decided that the match alone would be enough; no extra elements were necessary to make a shot that would stand out. All I had to do was use a fast enough shutter speed to capture the exact instant the match head ignited.

I used a clamp to attach the matchbox to a tripod, because I didn't want too many moving elements in the shot. I attached my CSC to a travel tripod on a small table in front of the matchbox. Putting my active focus point over the matchbox, I autofocused on the striking surface and then switched to Manual Focus so it wouldn't change when I pressed the shutter button.

I knew I'd have to use a fast shutter speed to capture the moment of truth, so I switched to Manual mode and dialled in the fastest shutter speed available to me on my Fuji X-Pro 1, which was 1/4000sec. I'd set up an illuminated backdrop for the scene, but at that shutter speed only the match's flame was visible, so I adapted my plan and decided to opt for a dark background.

After a bit of trial and error I found that an aperture of f/7.1 gave me a large enough depth-of-field to capture the match head, yet allowed me to keep my ISO at a reasonable 1000. This resulted in a bit of Noise, but it was nothing I couldn't fix in Photoshop.

I set the camera's Drive mode to Continuous and shot a burst of six shots. Striking the match was unreliable, resulting in lots of wasted frames. It also meant I often strayed from my zone of sharp focus, so I decided to position the match in the shot first, then light it with a second match. I activated my camera's 2secs Self-timer so I had both hands free for firing the shutter and lighting the match. After a bit of practice I got two shots I was happy with. Individually, they were pretty good, but when I blended them together using a Layer Mask in Photoshop, I got a spectacular flower shape that gave a great effect.





Using natural light, an ISO of 1000 allowed for an aperture of f/7.1 using the Fuji X-Pro 1's top shutter speed of 1/4000sec.

Lessons learned

Standard matches flared quickly and didn't produce a large enough flame to make an eye-catching shot, so I went with cook's matches instead. These have larger heads and burn for slightly longer. They're too long to strike, so I lit them with a second match.

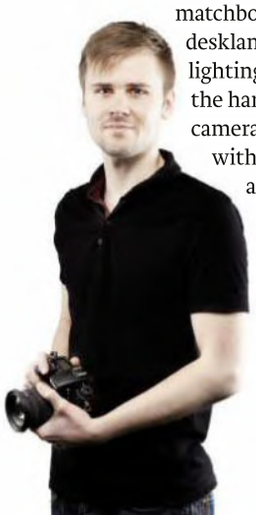
Playing with scale and taking care to match the elements together seamlessly is a great way to get an interesting perspective on an everyday subject.

SHOT 2

Dan shrinks three models in Photoshop

You'll have to excuse the pun, but I really wanted to think outside of the 'box' this month. When I was given the brief of a box of matches, I toyed with the idea of fire, but I thought this may be too obvious. I cast my mind back to a miniaturising technique we explored in the May issue – and this ignited the idea for my big matchbox shot.

First, I made a sketch to get a rough angle of the matchbox. Once I'd done this, I searched around the house for a suitable backdrop. I wanted keep things simple, so I used a sofa with a leatherette finish. I positioned the matchbox on the sofa and placed a desklamp behind it for dramatic lighting. A reflector helped to fill in the harsh shadows. I then set up my camera on a tripod and framed up with a macro lens. With the aperture set to f/16, I took three shots, focusing on the foreground, the front corner of the matchbox drawer and the text on the box. I then stitched the three pics together in Photoshop using the Photomerge function. Doing this creates a focus-stacked pic that's sharp right through – the kind of effect you'd get if the matchbox was huge.



The next step was to shoot my models. I used a white background so they'd be easy to cut out, and asked them to adopt different poses as though they were interacting with enormous matches! The shooting angle needed to be the same as the matchbox I'd already captured, so I used a step ladder to gain height and shoot down on them.

In Photoshop I cut out the models with the Polygonal Lasso tool, and pasted them in separate Layers on my matchbox shot. After moving them into position, I painted on the shadows to add a sense of realism and scale to the scene.

The project was loads of fun and gave me a creative image reminiscent of *The Borrowers*!

I cut out the models and pasted them into the matchbox shot



Shooting from a step ladder allowed me to gain extra height and get the same angle I'd used for the matchbox shot.

Lessons learned

Shooting the models and the matchbox at the same angle and with the same directional lighting is the key to a seamless miniature shot. To match the pics, I made a print of the matchbox image and shot my portraits from a high angle view by using a step ladder.

SHOT 3

Matty gets the party started using shallow depth-of-field

Much of my photography revolves around portraiture. The reason for this is I have two small children and they're (usually) willing to pose in return for sugar-based treats. When I learned this month's theme was matches, I quickly thought of what fills my weekends – kids' parties and plenty of cake!

The best photo opportunity at any party is when the cake is presented, the candles ignited and the birthday girl or boy's face lights up. Capturing this image though, throws up a few technical challenges. To make the most of the candlelight, the environment needs to be pretty dark, but this then slows the shutter speed and increases the risk of camera shake. So a delicate balance must be struck – keep the location dark enough to bring out the glow from the match and candle, but ensure the shutter speed is quick enough to banish blur. Luckily, I had two weapons at my disposal to help me achieve the correct shot. The first was a 50mm prime lens, which allowed me to select a large f-number of f/2.8. This aperture not only created a shallow depth-of-field to blur the background, it also allowed more light into the lens and gave a faster shutter speed.

I had two weapons at my disposal – a 50mm lens and control over the ISO



With the ISO at 1600, a large aperture of f/2.8 gave a shutter speed of 1/100sec in candle light – plenty quick enough for a portrait shot.



Constructing a natural and realistic scene gives context to the subject of the challenge – the match.

Secondly, the Canon EOS 6D I used is great for controlling digital Noise. In the past, pushing the ISO to 1600 would have led to an image so grainy, you'd think it had been rubbed down with sandpaper. But with modern kit, you can confidently bump up the ISO without compromising quality. By raising the ISO to 1600, I was able to shoot in Aperture priority mode with a reasonably fast shutter speed of 1/100sec.

To help create a birthday party scene, some well-placed bunting was hung in the background and my model donned her princess crown. With the candle lit, a little encouragement was all that was needed to strike a 'blowing out the candle' pose as I snapped away, shooting in RAW. My post processing was fairly minimal. The white balance was warmed up, with the orange hues complimenting the light from the candle.



Lessons learned

This shot proved that you can push ISO levels higher than you'd think without spoiling image quality, and that tweaking the White Balance of a RAW file can quickly adjust the colours to complement the mood.

Send us yours!

Now you've seen what the team has produced, have a go yourself. Send us your shots and they could appear in the UK's top photo mag! Email pics to: *dpimages@bauermedia.co.uk*

EXTREME DREAMS



From shooting his mates at the skatepark to working for action sports giant Red Bull, Olaf Pignataro has enjoyed quite a ride...

WORDS BY MATTY GRAHAM

WHEN WAS THE LAST TIME YOU pushed yourself to the extreme? Not just out of your comfort zone, but right to the edge where your life is in danger. Where your body temperature is close to hypothermia or a 200mph racing car is hurtling past just inches away?

When it comes to action photography, a brave and bold approach can net amazing imagery. One man who's carving out an impressive career by leaping out of his comfort zone is professional action sports photographer, Olaf Pignataro.

Italian photographer Olaf now splits his time between Milan and London but enjoyed humble photographic beginnings. "As a kid, I used to spend all my time skating and riding my BMX, even gaining a little coverage in magazines as a rider," he explains. "When some friends of mine started a BMX fanzine, I was willing to help so I grabbed my mother's camera (a Yashica film SLR) and started to shoot my pals at the local skatepark, during road trips and at events." Soon Olaf's friends began gaining sponsorship deals and he was asked to supply images for advertising needs. There was no money on the table, but film costs and travelling expenses were met, allowing Olaf to gradually improve his craft with someone else footing the bill. Plus, there were additional kickbacks in the shape of free sneakers and sunglasses!

The major shift in Olaf's career came when a certain sports drink company came calling. "One of my buddies got sponsored by Red Bull and they needed some pictures of him. They paid me a proper fee and got me started on the road to becoming a professional." Red Bull embraces photography in a unique way. The company has a team of pro shooters, hosts a



Olaf used exquisite timing and natural light to backlight this competitor during a surfing event in France.



Olaf used a 70-200mm zoom to capture skater Daniel Cardone executing a frontside flip during a photoshoot in Barcelona, Spain.



Shooting into the sun allowed Olaf to throw this BMX rider into silhouette against the Barcelona sunset.

Who is Olaf Pignataro?

Native to Italy, but based in both Milan and London, Olaf is a professional sports photographer, who also shoot portraits. Additional clients include Jeep, Nike, Mizuno, Fiat and GoPro. More of his amazing photography can be seen at *www.olafpix.com* and you can also follow his Instragram account by searching for *@olafpix*.

prestigious photo competition and are synonymous with extreme sports. More importantly though, the photo team has a strong community feel to it and for ambitious photographers, working with Red Bull can be a real shot in the arm, introducing newer pros to new skillsets and non-capture elements of the business. "I wasn't a very talented photographer at the start and Red Bull initially hired me for just small-scale events," confesses Olaf. "But working for them, I had to learn their workflow – which comes useful in any kind of shooting – and I also got to work with world-class photographers who inspired me to learn more and improve my images."

As his skills grew, Olaf garnered more trust from the picture editors at Red Bull and began to shoot bigger events like the America's Cup and aerobatics flying. Both events feature fast movement, which has always been at the core of Olaf's attraction to photography.

Olaf started with action sports because he was already part of the scene – he understood the buzz, spoke the language and had the bruises from the skatepark to prove it. Now, what was once a hobby is a job, and one that is all-encompassing.



A GoPro Hero+ action camera allowed Olaf to capture this unique perspective on the swim stage of the Forte Village Triathlon in Sardinia.

I got to work with world-class photographers who inspired me to learn more

Travel opportunities through Red Bull are vast, and Olaf rarely spends more than five days per month at home. "I don't complain about the travel. I prefer to join up multiple working trips, spending any spare day visiting new places or meeting old friends along the road." To date, Olaf has worked in the US, South America, Japan and Iran. "I began to take photos because it allowed me to keep

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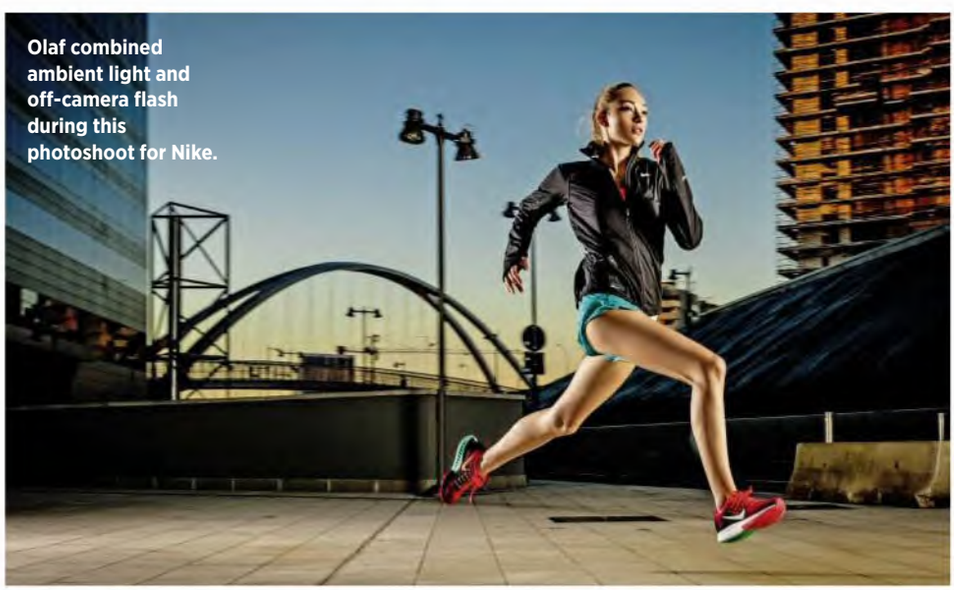
Olaf used a GoPro to capture Italian motocross star Tony Cairoli while he was 30ft up in the air, executing a trick.

travelling, even if I wasn't practising my skating and BMX anymore."

Olaf's working week is hectic by anyone's standards. Before any shoot he will arrive a day early and recce the area. Another day is spent after the shoot returning any hire equipment and backing up images before processing the selected frames. Time

If something goes wrong, I will die. It's as simple as that

schedules are not the only challenges Olaf faces, because with action sports there are unique hurdles you'd never encounter when shooting landscapes, macro or other photo disciplines. "Some stunts are very dangerous, so the athlete is going to perform them only once, and you really don't want to miss the trick," says Olaf. "It comes down to a fraction of a second. You have to be trained to trigger the shutter at the exact moment – even before your brain registers it." And simply using a lightning-fast frame rate as a safety net is not an option. This is because he usually shoots with off-camera flash and the batteries used in the flash units need time to recycle the charge after firing.



Olaf combined ambient light and off-camera flash during this photoshoot for Nike.

With motocross bikes or 200mph F1 cars whizzing past just inches from his lens, it's Olaf – and not his subject – in harm's way. This would be enough to deter some photographers, but for Olaf it's a necessity to place his trust in the athletes, to wear a helmet and (ultimately) accept any outcome.

"If something goes wrong, I will die. It's as straightforward and simple as that."

It's this unwavering bravery that's helped Olaf produce a stunning portfolio – not just for Red Bull, but for huge brands, such as Fiat and Nike to name but two. By landing these big commissions, Olaf has been able to fine-tune exactly what elements need to be included to create a great action sports image. "Location, athletes and lighting are the core ingredients. And for me, it's the location that's the most important. I always look for new spots when driving around a place I've never been before. Then I try to understand whether I can shoot there without permits, or if I need to get permission to take my shots."



Olaf attached his GoPro camera to the wing of a plane for a unique view during an air show at the America's Cup World Series Regatta in Naples, Italy.

There's a sense of camaraderie, born out of the travel and danger

Olaf's skill in sourcing locations, pre-visualising his compositions and controlling his camera are second to none, but he still makes sure he has the right tools for the job. His basic equipment includes a Nikon D4 DSLR, paired with either a 24-70mm f/2.8 or 70-200mm f/2.8 lens. Olaf also takes along a GoPro Hero action camera – perfect for shooting underwater and showing events like triathlons in a new light. For more involved shoots, he'll pack a second DSLR body and 14-24mm f/2.8, 200-400mm f/4 and 400mm f/2.8 optics. As he frequently shoots with off-camera flash, an Elinchrom Quadra kit and some Pocket Wizard wireless triggers completes the gear list.

Loaded with top-notch kit, Olaf is now a well-established pro, but in the world of action sports, the 'needle' and rivalry between pros that's often seen in other disciplines isn't an issue. Olaf explains that there's a sense of camaraderie, born mostly out of the intense travel and danger inherent in extreme sports. "BMX photographers used to meet at the same international contests and travel with the same athletes over the never-ending road trip," he says. "Now we're older, most of us have moved out of our niche to broader subjects, but we share the same roots so we're happy to see each other at events."

This friendly atmosphere is reflected in Olaf's willingness to help others learn the craft. The number one nugget of advice he pushes is not to spend too much time at home in front of a computer, but to get out and take photos. Lots of photos.

"You have to be proactive. Get out there, practise your shooting and if you can, hook up with local riders or skaters and organise your own photoshoots."

With great advice like that, maybe a stint as a sports photography tutor will play a part in Olaf's future? If you sign up for a lesson, just remember to bring a helmet!

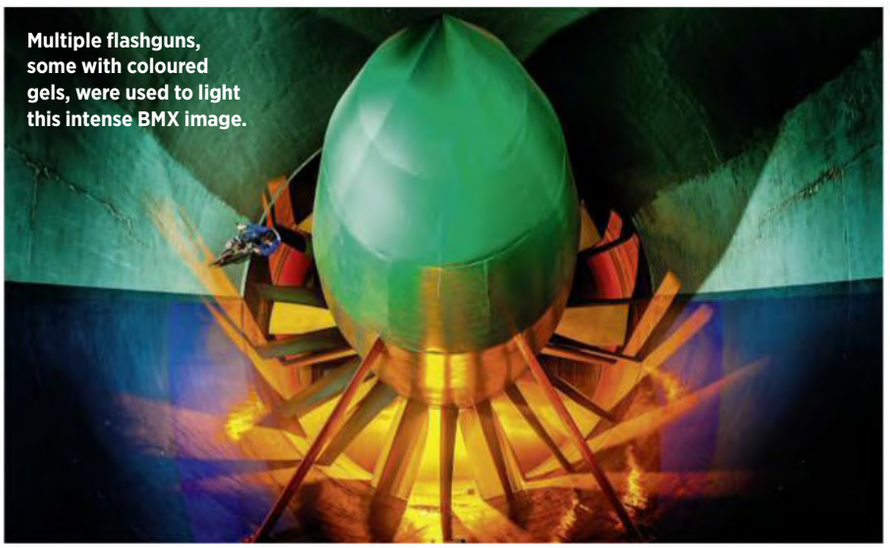
Discover the Illume



Been inspired by Olaf's images and want to see more great action photography? The Red Bull Illume is a photo competition with the best images exhibited around the world. The next content is scheduled for 2016, with submissions accepted in the autumn. You can learn more about how to enter at *www.redbullillume.com*



©HELGE KIRCHBERGER/RED BULL



Multiple flashguns, some with coloured gels, were used to light this intense BMX image.



A 400mm telephoto lens was needed to tightly frame the action during this America's Cup race.

Quickfire questions



Are you a Photoshop or Lightroom guy?

I do most of the editing in Adobe Lightroom, as I believe it is much quicker than Photoshop. I only really use Photoshop for fine-tuning pictures once I have made all the main adjustments and exported the image from Lightroom.

What's your go-to lens for an action shot?

I really like to shoot with Nikon 24-70mm f/2.8. After shooting with it for a few years, I've found it to be a clean and versatile lens which offers endless opportunities in term of framing and creativity. It spends a lot of time on the front of my camera.

If an athlete falls or crashes, do you keep shooting or stop and help?

I keep shooting and let someone else give first aid. I appreciate this may sound cruel, but as photographers, we're there to record and report on what is happening in front of us.

If you could shoot any sport in any location, what would you choose?

I was working on a couple of projects in Ukraine and in Yemen, but as soon as I presented them to the clients, wars began to spread in both places, preventing the projects getting comissioned. So, I prefer not to talk about my next dream location in case World War 3 breaks out there!

What does the next six months hold for you and your photography?

I have some big sports events coming up, including a great one in Scotland.

The gear Olaf uses to create his stunning images



Olaf's kit bag includes both high-tech photographic gear and more domestic items. All are essential to him as he travels around creating jaw-dropping action shots. Olaf's main camera body, a weather-proof 16.4-megapixel Nikon D4, is a very ruggedly built pro DSLR. It can take a few knocks and keep shooting, and can fire at a rate of 11 frames per second.

When Olaf is working in the water, a pair of flippers are essential to allow him to manoeuvre into position to capture the best angles. Action sports events can involve long, arduous days, so Olaf keeps his headphones nearby to escape with some music, and a smartphone is essential to keep him in touch with event organisers.

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ABTA Travel with confidence

DIGITAL PHOTO



Photoshop GENIUS

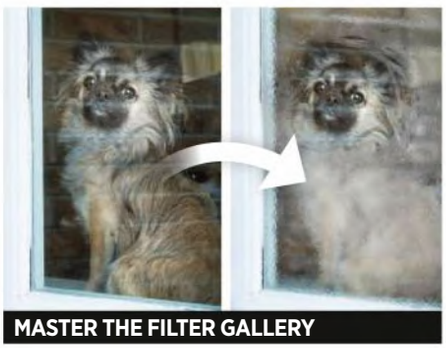
Discover the skills today's photographers need!

HARNESS THE POWER OF **FILTERS**



GENERATE ELECTRIC PORTRAITS!

Add superpowers to people pics! p78



MASTER THE FILTER GALLERY

Create special effects with Filters p90



EMULATE LARGE APERTURE LENSES

Blur backgrounds for slick shots p88



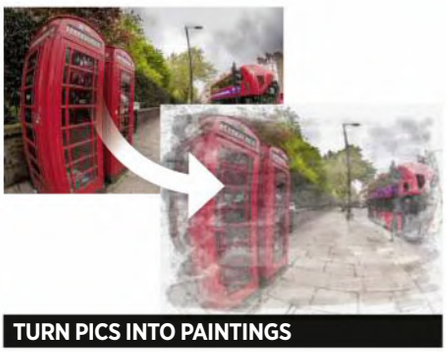
IMPROVE AND ENHANCE RAW COLOURS

Make scenics 'pop' in Lightroom p94



FILTER FLORALS FOR A NEW TWIST

Give blooms a striking new look p72



TURN PICS INTO PAINTINGS

Make a digital watercolour p76



REINVENT ARCHITECTURAL SHOTS

Add skies and recolour buildings p84



ON YOUR FREE PHOTOSKILLS CD THIS ISSUE

LEARN PHOTOSHOP THE EASY WAY WITH EXPERT VIDEO LESSONS FROM THE DIGITAL PHOTO TEAM

CREATIVE FILTER EFFECTS

THERE'S A VAST RANGE OF Filters available in image-editing software, and these can be used to create all kinds of effects. From subtle enhancements to extreme distortions, Filters offer the chance to add a new dimension to your photography. As with all image-editing processes, the work is computer based, but reinventing your shots on screen is just as exciting as taking them in the first place!

In *Photoshop Genius*, you'll learn the techniques that will develop your imaging skills at a rapid pace. With regard to software, Adobe Photoshop is the best-known example, though there are different versions of it, plus many other packages on the market from various software makers. A digital picture consists of a mosaic of tiny squares called pixels. A 24-megapixel picture will feature 24 million of them, and each one has its own colour and brightness value.

Getting a new look

By adjusting these values in editing software, you change the way the picture appears. You can use a variety of methods to adjust the brightness and colour of the pixels, and you can change the way they look using processing effects. Filters are the most common of these, and present you with adjustment sliders that alter the character of the effect produced.

To build up an image, Layers are used. These allow different areas to be edited separately, and also let you introduce different elements into the mix such as parts borrowed from other pictures. Filters can be run on Layers, so you can isolate the effect to specific areas.

The *Digital Photo* method

In *Digital Photo*, we break down essential imaging techniques into easy step-by-steps. Our inspiring projects are backed up by video tutorials, so you can see the techniques brought to life on your computer screen.

PHOTOSHOP ELEMENTS THE CORE FEATURES & FUNCTIONS

TOOLBOX
This palette contains all the tools used to make changes. Click on a tool to select it, and further options will appear in the Tool Options bar.

MENU BAR
Each item in the menu bar at the top gives access to a drop-down list of options. If our tutorials ask you to go to **File→Open** or **Window→Layers**, this is where you do it.

VIEW TOOLS
Zoom in and out and scroll around the picture to work on small or large areas.

SELECTION TOOLS
Select a specific area of a picture so it can be edited independently.

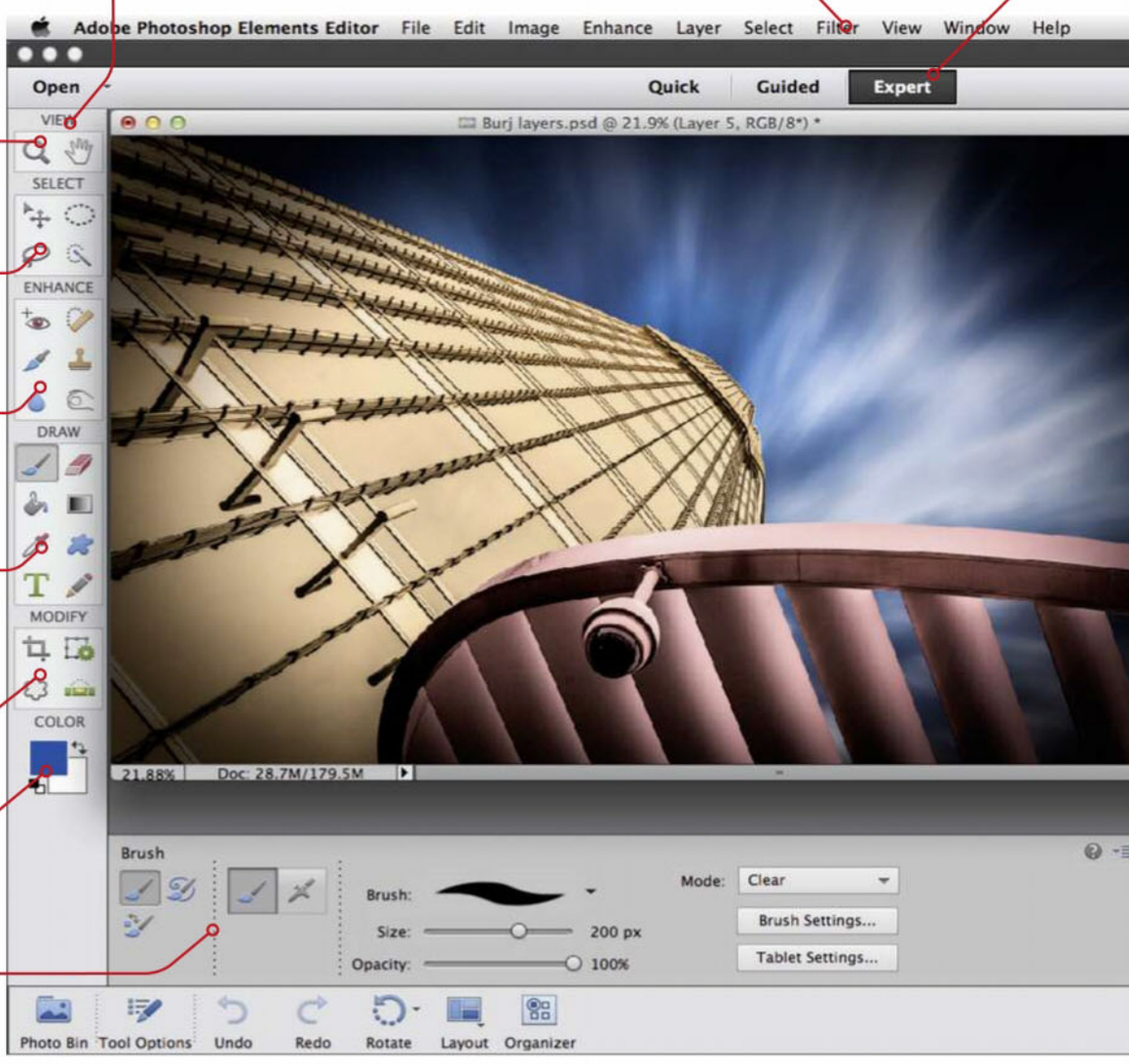
ENHANCE TOOLS
Make changes to the pixels within a picture or a part you've selected.

DRAW TOOLS
Paint, erase or add text to your image using these features.

MODIFY TOOLS
Crop or recompose to alter the size and shape of the entire picture.

COLOR TOOLS
Choose the foreground and background colours that the tools will use.

TOOL OPTIONS BAR
Set up the tool you've selected so it works in the way you want it to.



IN PHOTOSHOP

Learn with DIGITAL PHOTO

1 Watch the video lesson
Load the disc, click on the video you want to watch, and our experts will walk you through.

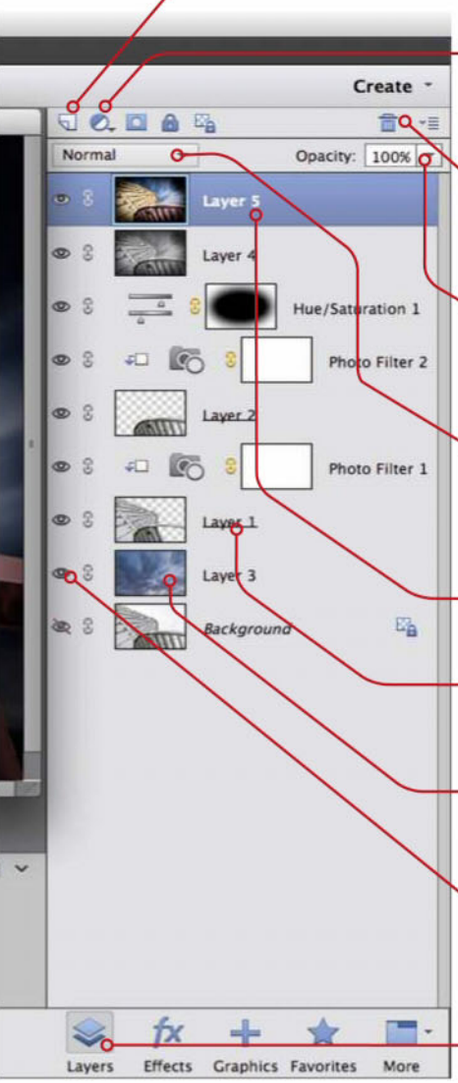


2 Follow the steps
Open the start images into your software and follow the tutorial in the magazine.



3 Produce a pro image
Complete the project then use the technique you've learnt to enhance your own shots.





EXPERT MODE
Click on this to enter the most feature-rich display mode for all projects.

LAYERS PALETTE
One of the most important palettes for creative imaging work, this is a core feature of Elements and Photoshop.

CREATE A NEW LAYER
Click to make a blank Layer.

NEW ADJUSTMENT LAYER
Click to bring up a list of Adjustment Layer options, and choose the one you want.

TRASH
Get rid of unwanted Layers by dragging and dropping them on this icon.

LAYER OPACITY
A slider lets you fade a Layer between 0% (transparent) and 100% (fully opaque) to control how it appears.

BLENDING MODES
A drop-down list lets you select from a large number of choices to affect how the Layer interacts with the Layer below.

LAYER MASK
Hides or reveals part of the Layer to which it's attached.

LAYER NAME
Double-click here to give the Layer a new name.

LAYER THUMBNAIL
A small-scale image to help you identify the Layer's contents.

SHOW/HIDE LAYER
Switch Layers on and off so you can see their effect.

PANEL OPTIONS
Layers is the default, though you can display other options, or customise your workspace under the More icon.

Image editing software options



PHOTOSHOP ELEMENTS 13 £60

Photoshop Elements is the stripped-down version of Photoshop targeted at enthusiasts. It offers the core features that photographers need and sports a similar interface to the professional Photoshop CC. Along with Layers, Layer Masks and a host of Selection tools, Elements offers a basic but effective version of Adobe Camera Raw for editing and enhancing RAW files.



PHOTOSHOP CC £8.57 MONTHLY

Photoshop CC (Creative Cloud) is the professional version of Photoshop. It's only available as a subscription, so you pay £8.57 monthly to use it. The deal includes Lightroom 6 so there's no need to buy this separately. As well as the tools in Elements, Photoshop offers Curves, the Pen tool, and Color Balance. It also features an advanced RAW converter, which shares the same RAW engine as Lightroom 6.



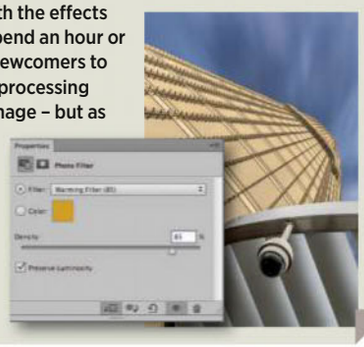
LIGHTROOM 6 £104

Photoshop Lightroom is a RAW workflow package offering a pro-level RAW converter and image management features for cataloguing your shots. It shares the same RAW conversion functions as Photoshop CC, but has a different interface. Lightroom doesn't feature Layers for creating shots with multiple images, but many photographers who don't want to subscribe to Photoshop CC find a combination of the standalone Lightroom and Elements meets their needs.

▶ *For more info on the above packages, visit www.adobe.com/uk*

Getting to grips with Filters

Go to the **Filter** menu in Photoshop or Elements, and you'll be presented with a list of options. Many of these have an arrow on the right, and this means there's an additional sub-menu with even more options. These choices vary depending on which version of Photoshop or Elements you have, but becoming familiar with the effects they create is a useful way to spend an hour or two. It's common for imaging newcomers to run filters globally – where the processing effect is applied to the entire image – but as your skills develop, you'll find that Filters can be even more effective when isolated to particular areas. The projects starting over the page will show you how to use filters with skill and care to produce fantastic effects.



TURN BRIGHT BLOOMS INTO ALIEN SPECIES!



Reinvent nature and give summery floral shots an exciting new look using Layers and Filters

TECHNIQUE & PICS BY JON ADAMS

At a glance

YOU'LL LEARN How to give a floral a new look by distorting petals and enhancing the background
YOU'LL NEED Photoshop or Elements
TIME REQUIRED 10 minutes
DIFFICULTY LEVEL Easy

On the disc

VIDEO LESSONS Watch as Jon runs through this exciting technique on your computer screen.
START IMAGE The picture Jon used for this project can be found in the Start Images folder. It's called *Sunflower.jpg*.

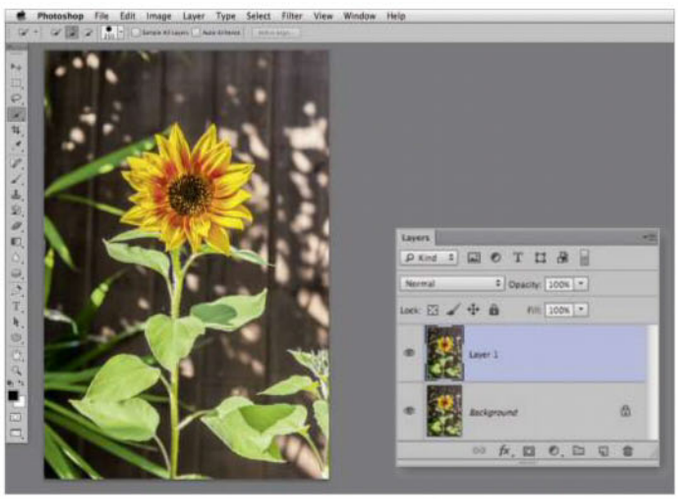
MAKING SUBTLE ADAPTATIONS to something familiar is a fantastic way to explore the possibilities of image editing. In Photoshop and Elements, the various Filters on offer provide an excellent way of achieving this, though applying effects across the entire image won't always produce the most eye-catching results. For many images, separating the subject into different sections will often bring far more interesting results, because this allows you to apply the filter effects to an isolated area.

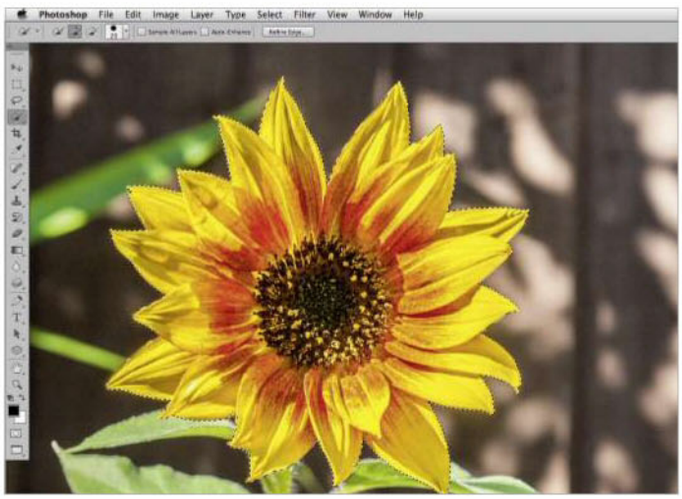
The Liquify filter is a hugely powerful tool, and is used to push existing pixels into new shapes. It's the filter of choice for resculpting body shapes and faces, and is the tool that regularly sparks debate when it's used to slim down models on fashion magazines.

For our example, we've used Liquify to elongate the sunflower's petals into elegant tendrils, giving a more surreal interpretation of a familiar subject. Creating this look first requires the petals to be separated from the rest of the image and placed in a new Layer. To augment the arty feel, we've used additional filters on the background to both blur out distractions and create a rush of movement. It's all easy to do – just follow the technique and you can take ordinary subjects in a creative new direction in minutes.



Taken in a back garden on a summer's day, this sunflower was captured on a 24-70mm lens at an aperture of f/7.1. It was quite breezy, so a fast shutter speed of 1/500sec was used to freeze any movement and ensure a sharp shot.





1 Open your flower and copy the Layer

Open a flower picture you've taken into Photoshop or Elements, or use *Sunflower.jpg* from the Start Images folder. When it's on screen, hit **Ctrl+J** to create a duplicate Layer. Open the Layers palette (**Window→Layers**) and you'll see the copy Layer floating above the Background Layer. Select the **Quick Selection tool** – it's grouped with the Magic Wand tool in both Photoshop and Elements. If you can't see it, hold down the mouse on the Magic Wand on the Photoshop Toolbox, or select it from the Tool Options bar in Elements.

2 Select the flower's head and petals

Set a brush size of about **250px** by tapping the square brackets keys (left to reduce size, right to increase), and then click and drag on the flower's head to select it. You'll select most of it quite quickly, but there may be a few areas outside the leaves that need refining. Zoom in tight on these with **Ctrl+Plus**, and reduce brush size to about **20px**. Hold down the **Alt** key, and click in these areas to remove them from the Selection, so just the flower head is surrounded by 'marching ants'.



AFTER

The petals have been turned into tendrils with the Liquify filter, and the clutter in the background has been disguised with a rush of motion blur.



3 Elongate the petals with Liquify

Hit **Ctrl+J** to punch the Selection into a new Layer and then go to **Filter→Liquify** in Photoshop (**Filter→Distort→Liquify** in Elements). In the Liquify interface, select the **Forward Warp tool** from the Toolbox on the left, and set a brush size of around **60px**. Drag the tips of the petals outwards to elongate them. Make sure you follow the curve of the petals to create a smooth extension. If it goes wrong, or you inadvertently create a double tip, hit **Ctrl+Z** to undo the last edit and try again. Once you've done this to all the petals, set a smaller brush size of **35px** and do the same thing again to give the petals sharper tips.



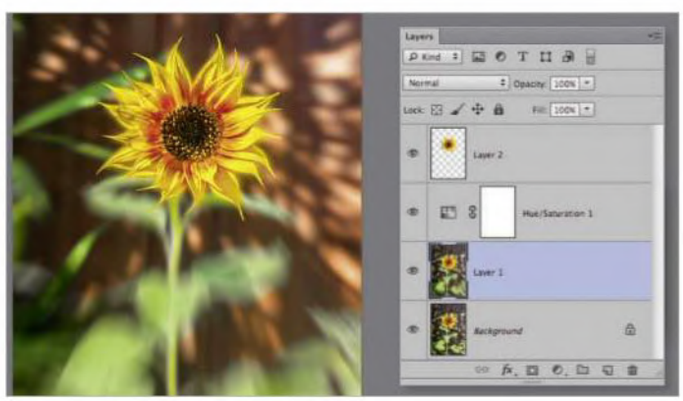
4 Enlarge the centre of the flower

Before you leave the Liquify filter's interface, select the **Bloat tool** and increase the brush size so it covers the central portion of the flower. In the example image, this required a size of around **800px**. Rather than tapping the square brackets keys, you'll find it quicker to highlight the value in the **Size** box and type it in. Position the brush directly over the centre of the flower and click four or five times to make it expand in the frame. Once you're happy with the new look, click **OK** and the Liquify filter will process.



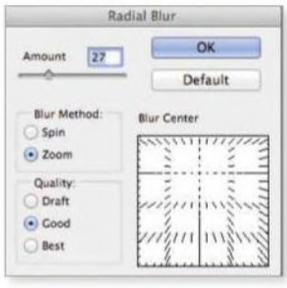
5 Intensify the background colour

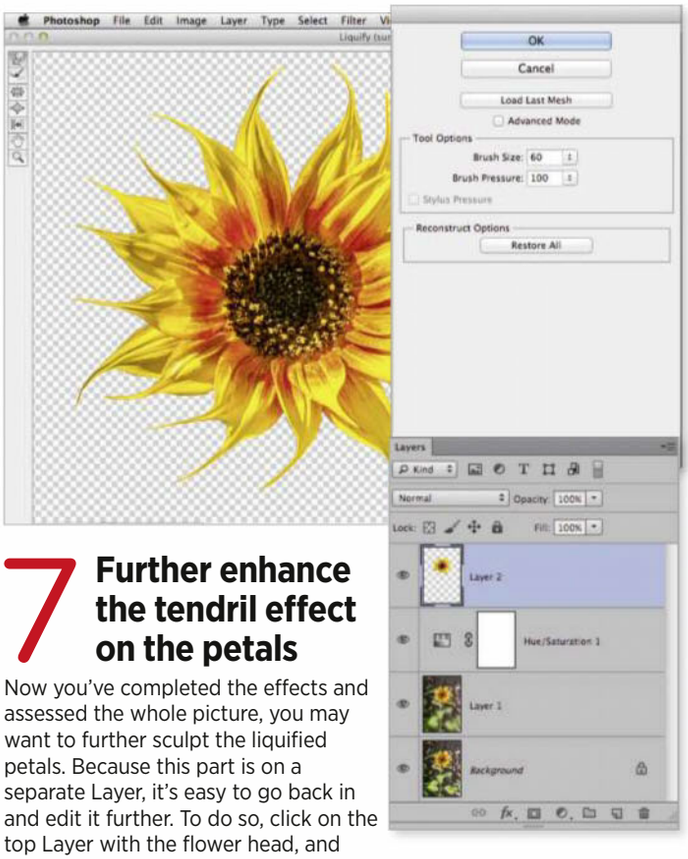
Your image will look quite dramatic, but the background needs some attention to give the pic more impact. Click on the middle Layer to make it active, and then click the **Adjustment Layer** icon. It's the half dark/half white circle at the bottom of the Layers palette in Photoshop, and at the top in Elements. From the list that appears, select **Hue/Saturation**. In the palette, click where it says **Master** and select **Reds** from the drop-down list. Move the **Saturation** slider to around **+70** to intensify the red colours in the scene and give the background some punch.



6 Add a rush of blur to the background

Click back on the middle Layer, then go to **Filter→Blur→Gaussian Blur**. Use a **Radius** setting of **12px** to soften the background. This gives a shallow depth-of-field effect to help the flower head dominate the scene, but the background still looks rather cluttered. To disguise this and give a rush of energy to the shot, go to **Filter→Blur→Radial Blur**. In the dialogue, tick the **Zoom** and **Best** options, then set the slider to around **27**. Drag in the **Blur Center** window to set it around two-thirds of the way up the frame, and click **OK**. If you're not happy with the position of the effect, hit **Ctrl+Z** to undo, then hit **Ctrl+Alt+F** to bring up the dialogue with the last settings. Now adjust the position or the **Amount** before hitting **OK** again.





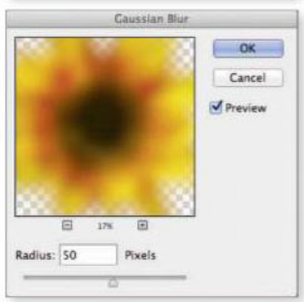
7 Further enhance the tendril effect on the petals

Now you've completed the effects and assessed the whole picture, you may want to further sculpt the liquified petals. Because this part is on a separate Layer, it's easy to go back in and edit it further. To do so, click on the top Layer with the flower head, and then open the **Liquify** filter the same way as in Step 3. Shape the petals into tendrils with the **Forward Warp tool**, or expand the centre further with the **Bloat tool.** Click **OK** to see the effect in the context of the full image, and repeat if needed to get the results you want.



8 Enlarge the flower and add a glow

Increasing the size of the flower head will give it more impact, so hit **Ctrl+T** to go into **Free Transform** mode. In Elements, make sure that **Constrain Proportions** is ticked in the Tool Options bar, or hold **Shift** in Photoshop, then pull out the corner handles to make it the size you want. Press **Return** to set down the changes. Hit **Ctrl+J** to duplicate the enlarged head, and then click back on the Layer beneath. To give an arty glow, go to **Filter→Blur→Gaussian Blur**, and enter a **Radius** of around **50px**. With the image complete, go to **Layer→Flatten Image** and save it under a new name via **File→Save As**.



Take it further! Make a three-in-a-row panel of sci-fi flowers

Once you've practised this great technique, take a wander round your garden or local park and snap a handful of flowers, keeping the heads all roughly the same size in the frame. Put your new-found skills to use on them, reshaping the petals into exaggerated versions. With repeated use, the technique only takes a few minutes, and you'll soon have a set of flowers sculpted into a more alien form. Pick your best three, and then create a new document (File→New), the size you want to print.

Open the first flower, click on its spiky, cut-out Layer and hit Ctrl+A, Ctrl+C, Ctrl+W. Then paste it into your new document with Ctrl+V. Do the same with the other two flower heads, and then arrange the Layers into a neat trio.

To move the flowers, click on the appropriate Layer to make it active, then hit V to select the Move tool. To resize them, use the Free Transform command (Ctrl+T) and drag the handles around the bounding box. If you want to add a frame around them, create a new Layer at the top of the stack, and paint white or black into it to give an arty finish.



Making a selection of alien flower shots into a three-in-a-row triptych with a black surround is easy to do and will turn your images into a panel of art to brighten up any room.

TRANSFORM PHOTOS INTO FINE ART – FAST!

At a glance

YOU'LL LEARN How to transform a standard photo into a watercolour effect
YOU'LL NEED Photoshop or Elements
TIME REQUIRED 10 minutes
DIFFICULTY LEVEL Easy

On the disc

VIDEO LESSONS Watch as Gavin runs through this absorbing technique on your computer screen.
START IMAGES The images Gavin used to complete this project are in the Start Images folder.



Create amazing watercolour effects with an authentic look in just a few minutes

TECHNIQUE & PICS BY GAVIN HOEY

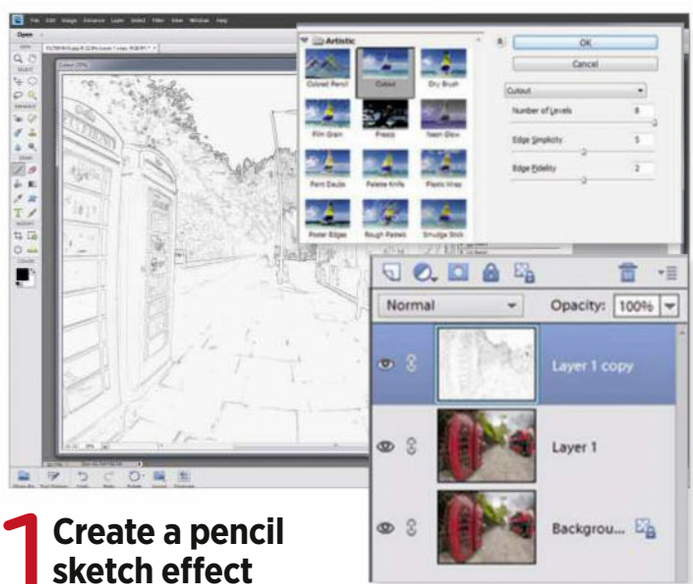
THERE ARE COUNTLESS WAYS to make a photo take on the look and feel of a painting with post-processing. Some techniques involve the use of special tools or textures and others require a certain artistic flare to pull off a truly convincing result.

But here's a watercolour effect that looks great, requires no special tools and absolutely zero skills at painting. The 'no special tools' bit is great news, because you can achieve the basic result using nothing more than the built-in filters you'll find in Photoshop and Elements. All you have to do is apply them in the right order, following this top filter recipe. To complete the look there'll be a little bit of painting, but thanks to some simple Layer tricks and a brilliant standard Photoshop brush, this part can be done in just two or three mouse-clicks.

As with most arty effects, the best photos require bold shapes and bright colours. It's also worth keeping in mind that Photoshop filter effects will vary according to the resolution of your photo. So if your photos have a particularly high or low megapixel count, you may need to adjust the settings to achieve similar effects.



The start image was taken with a fisheye lens, and features bold colours and strong shapes. This gives it the ideal qualities for this exciting filter effect.



1 Create a pencil sketch effect

Open your image or use *Filter-Bus.jpg* from the Start Images folder. Hit **Ctrl+J** twice to make three identical Layers. Go to **Filter→Filter Gallery...→Stylize→Glowing Edges**. Set **Edge Width** to **1**, **Edge Brightness** to **20** and **Smoothness** to **15** then click **OK**. Next, press **Ctrl+I** followed by **Ctrl+Shift+U**. You'll have a pencil sketch which can be enhanced by going to **Filter→Filter Gallery... →Artistic→ Cutout.** Set **Number of Levels** to **8**, **Edge Simplicity** to **5** and **Edge Fidelity** to **2** before clicking **OK**. Finally for this Layer, click **Filter→Filter Gallery...→Distort→Glass**. Set **Distortion** to **8**, **Smoothness** to **15**, **Texture** to **Canvas** and **Scaling** to **200%**. In the Layers palette, click where it says **Normal** and change the Blending Mode to **Multiply** and this Layer will be complete.



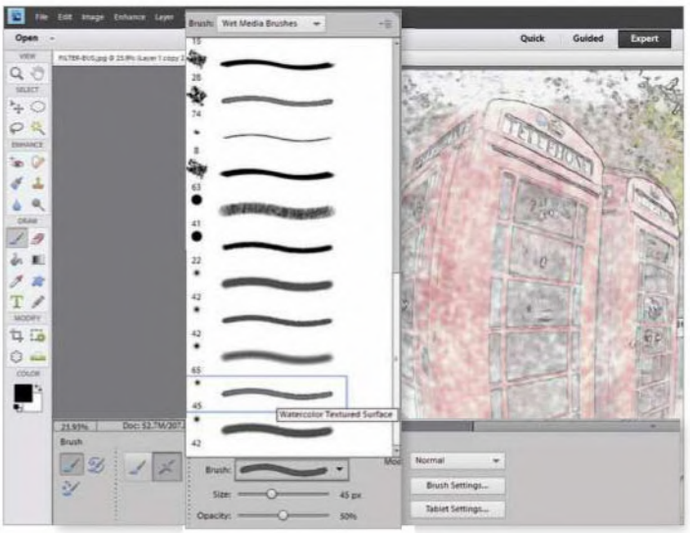
2 Get the watercolour look

Click the 'eye' alongside the top Layer, then click on the middle Layer's thumbnail to make this Layer active. To make the watercolour effect head back to the Filter menu and click on **Filter→Filter Gallery...→Distort→Glass**. Change **Distortion** to **20** and leave everything else unchanged. Click **OK** and then go to **Filter→Filter Gallery...→Brush Strokes→Accented Edges**. This time you'll need to set **Edge Width** to **14**, **Edge Brightness** to **25** and **Smoothness** to **15**. Click **OK** and you're almost done with the various filters. Press **Ctrl+F** three times to repeat the last used filter with the same settings. Finally, change the Blending Mode from **Normal** to **Darken** and switch the visibility of the top Layer back on by clicking the 'eye' icon.



AFTER

The photo has been transformed into a watercolour with a hand-crafted feel, and it's all achieved using Filters.



3 Get a hand-painted finish

It's now time to add a brush effect. To do this, press **Ctrl+J** followed by **Ctrl+I** to make a new, inverted Layer. Change the Blending Mode from **Normal** to **Linear Dodge (Add)**, then press **D** to reset your foreground and background colours to the default black and white. Select the **Brush tool** (**B**) and from the Brush Preset Picker in the Tool Options bar, find the **Dry Brush** tip. Increase the brush size to around **800px** and lower the **Opacity** to **50%**. Paint over the inner area of the picture using as few clicks as possible, and then load the **Wet Media** brushes (in Photoshop you'll need to click on the flyout arrow on the Brush Preset Picker to do this). Find the **Watercolor Textured Surface** brush tip and increase the size to **800px**. Continue painting on the picture to reveal more and more detail.

Bonus video Make your own fantasy filter

Filter effects in post-processing are great fun and have almost limitless creative possibilities. But back in the days before digital it was optical filters that allowed photographers to get creative. These screwed on to the lens to produce their effects. In *Technique of the Month Extra* you'll get to mix both old and new by creating your very own fantasy photo filter.

You can catch the bonus video, which is completely free to watch on our website. All you have to do is sign up to our *Technique of the Month Extra* mailing list. You can do this online at *www.photoanswers.co.uk/extra*. Register now, and you'll get a fantastic free video to boost your skills every month, so you'll never be short of new digital techniques to try.



See how to create a filter effect that mixes old and new in the bonus video on our website at *www.photoanswers.co.uk/extra*

GIVE YOUR FRIENDS SUPERPOWERS!



Learn how to render lightning bolts and blend elements to create an amazing image

TECHNIQUE & PICS BY ANDY HEATHER

PHOTOSHOP'S GREAT FOR brushing up your photos, but it's also the number one tool for really dramatic creations that require elements you could never shoot. The lightning effects in this futuristic portrait are all made within Photoshop using Filters in a special way. This project will not only take your editing skills to a new level, but it'll also provide you with fun portraits that kids of all ages will love. After all, who doesn't want to have some superpowers?

For this image we shot our model in a living room, standing in front of a textured backdrop. We concealed a small, round LED light (£2.99 from Wilko) in each of her palms and had her shine them into her own eyes. The idea was to bathe her face in cool light as if she were being illuminated by electricity emanating from her hands.

With that done, we brought the image into Photoshop and created the lightning with some digital sleight of hand. Read on to find out how...

At a glance

YOU'LL LEARN How to render artificial lightning using Difference Clouds, how to mask images and how to create lens flare effects
YOU'LL NEED Photoshop or Elements
TIME REQUIRED 20 minutes
DIFFICULTY LEVEL Medium

On the disc

VIDEO LESSONS Watch as Andy runs through this attention-grabbing technique on your computer screen.
START IMAGES The pics used are in the Start Images folder. They're called *Superpower (background).jpg* and *Superpower (light).jpg*





The model was shot in a living room, holding LED lights. The floorlight was shot on a street on a wet evening. The falling rain resulted in vapour which created a smokey effect.



AFTER

The model is conjuring lightning in her palms, which illuminates her face. The bright light has also illuminated dust specks on the lens, creating white orbs around the shot.

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→

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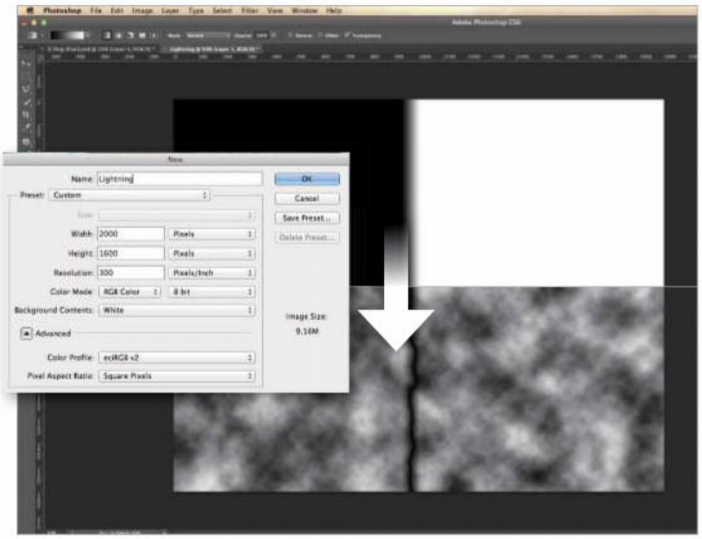
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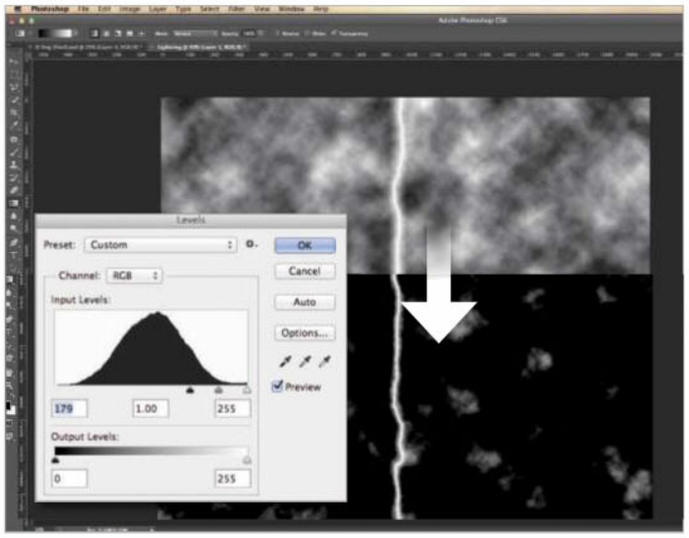
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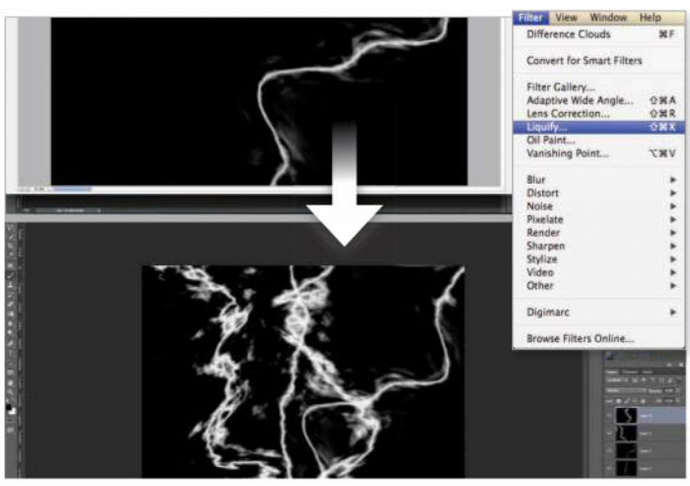
1 Create a linear gradient and render difference clouds

Open *Superpower (background).jpg* into Photoshop or Elements from the Start Images folder. Leave it up on screen, and then create a new blank file (**Ctrl+N**). Set the Width to **2000px** and the Height to **1600px**. Set the Resolution to **300ppi**. Name your new file *Lightning* and click **OK**. Reset your colours by pressing the **D** key. Create a new Layer using **Shift+Ctrl+Alt+N** and fill it with black by hitting **Alt+Backspace**. Activate the **Gradient Tool** by pressing **G**. In the Tool Options bar, make sure that **Foreground to Background** and **Linear** are selected. Drag from left to right to create a vertical gradient, keeping the black-to-white transition abrupt. Go to **Filter→Render→ Difference Clouds** and you'll see a black line through the image.



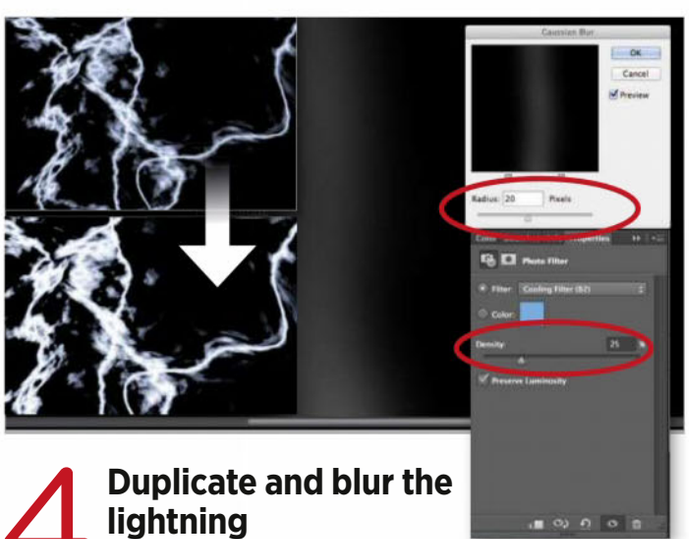
2 Invert colours and use Levels to define the lightning bolt

Hit **Ctrl+I** to invert the colours and you'll see the black line become white. This will become your lightning bolt. At the moment there are a lot of clouds around it, so you need to tidy it up. First, hit **Ctrl+L** to open **Levels** and drag the Shadows slider (the black triangle) to the right to add some definition to the lightning bolt. Pushing it too far will make your lightning bolt thin. However, you want the light to appear to bloom, so leave the bolt quite thick. When you're happy with the look of the lightning bolt, click **OK** to close the dialogue box. Next, activate your **Brush tool** (**B**) and with black as your foreground colour, paint over any unwanted white specks surrounding the lightning bolt to clean up the Layer. The lightning bolt is looking good, but it's a little too straight so let's fix that in the next step.



3 Liquify the lightning bolt to change its shape

Go to **Filter→Liquify** (**Filter→Distort→Liquify** in Elements) and use the **Forward Warp Tool** (**W**) to push the lightning bolt into a curved shape. When you're happy, click **OK** and the filter's effect will process. Now you have one lightning bolt, create a new Layer (**Shift+Ctrl+Alt+N**) and repeat the previous steps to create another, but this time vary the angle of your gradient so the second bolt will appear to emerge from the model's palm in a different way. When you're done, change the Layer's Blending Mode to **Screen** so the black portions of the Layer vanish and both lightning bolts are visible. Do this four times in total, changing the angle with each, so you have four lightning bolts emanating from roughly the same point.



4 Duplicate and blur the lightning

Now you've got a series of intertwining lightning bolts on separate Layers, it's time to merge them and make them glow. Hit **Shift+Ctrl+E** to merge all the visible Layers. Now all the lightning bolts are on one Layer, hit **Ctrl+J** to duplicate it. Blur the new Layer by going to **Filter→Blur→Gaussian Blur** and set the **Radius** to **20px**. Click **OK** to close the dialogue box and set the **Blending Mode** to **Screen**. Now it looks like the lightning bolts have a glow around them. Merge the Layers again (**Shift+Ctrl+E**). We want to maintain the blue colour scheme of the image, so click the **Adjustment Layer** icon in the Layers palette and select **Photo Filter**. Select **Cooling Filter (82)** and click **OK**. Merge again (**Shift+Ctrl+E**) and copy the image by hitting **Ctrl+A** then **Ctrl+C**. Close the window (**Ctrl+W**) and paste it into *Superpower (background).jpg* by pressing **Ctrl+V**.

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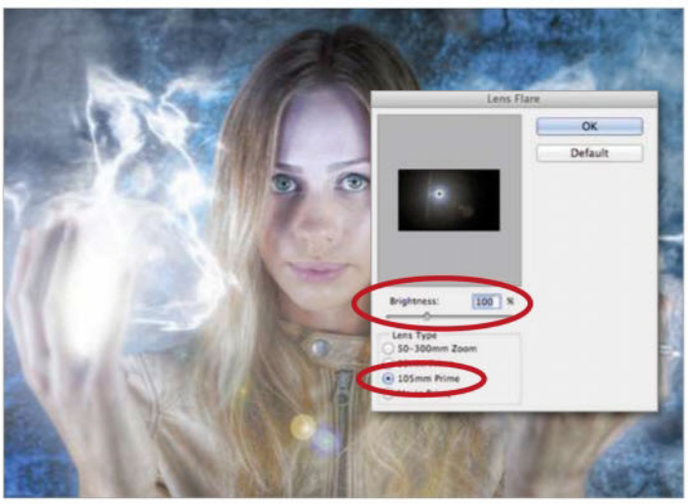
5 Duplicate and Liquify again

Now your lightning needs to be blended into the shot. First, change the **Blending Mode** to **Screen** so the black areas of the Layer vanish. Click the **Add layer mask** icon and paint with a soft, black brush (**B**) to hide the lightning where the model's fingers are. Also, paint the ends of the lightning bolts to hide any unnatural edges. When you're done, hit **Ctrl+J** to duplicate the Layer and use the **Move tool** (**V**) to drag the duplicated lightning bolts to the other hand. To make it look different, use the **Liquify** filter as you did in Step 2. Experiment with the **Forward Warp Tool** to vary the bolts' shapes. Again, use a black brush (**B**) on the Mask to make the fingers visible. Use a white brush on the Mask to restore the lightning.



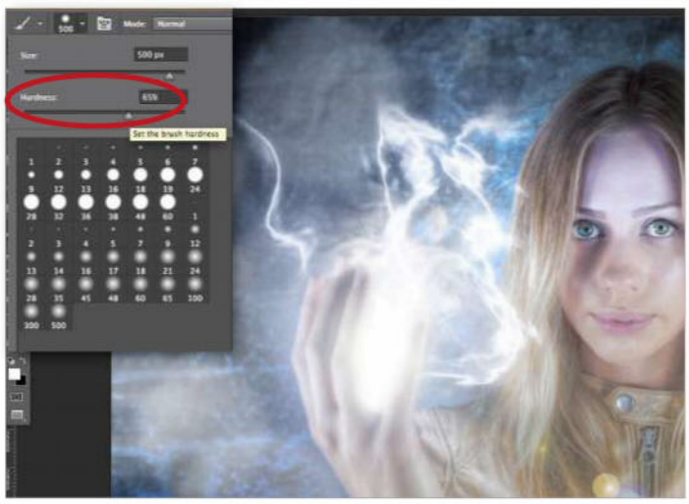
6 Add the smoking streetlight shot to the hands

With the top Layer still active, go to **File→Open** and double-click on *Superpower (light).jpg* from the Start Images folder. Hit **Ctrl+A** to select it and **Ctrl+C** to copy it. Press **Ctrl+W** to close it, then hit **Ctrl+V** to paste the light into the main image. Change the Blending Mode to **Screen** to hide the dark areas of the shot. Now hit **Ctrl+T** to go into **Free Transform** mode and drag the control handles until the smoking light fits in one of the model's hands. Hit **Return** to confirm the changes. The light will obscure the model's hands, so click on the **Add layer mask** icon and use a small black brush (**B**) to paint over the fingers, allowing them to show through. Keep your brush slightly smaller than the fingers so the light appears to bloom between them. Also brush over any other white specks, leaving only the light in the model's hands.



7 Add lens flares to the lightning balls

To hide any imperfections and to add some extra impact, put a lens flare in each hand. To do this, create a new Layer (**Shift+Ctrl+Alt+N**) and fill it with black by hitting **D**, then **Alt+Backspace**. Next, go up to **Filter→Render→Lens Flare**. Leave the **Brightness** at **100%** and under **Lens Type**, select **105mm Prime**. This has a blue colour cast that nicely matches the image. Click **OK** to close the dialogue box and then change the Blending Mode to **Screen**. Select the **Move tool** (**V**) and drag the lens flare to the model's hand. Click on the **Add layer mask** icon and with a soft, black brush (**B**), paint around the edges of the lens flare Layer to soften the abrupt falloff of the light effect. Duplicate the Layer (**Ctrl+J**) and drag the duplicate to the other hand. Paint black or white into the Mask to repeat the effect.



8 Add some dust specks and save

When there's a bright light in an image it often illuminates specks of dust on the lens, resulting in white orbs in the image. For a final touch, add a few more of these. Create a new Layer (**Shift+Ctrl+Alt+N**) then select a round, white brush (**B**), Set the **Hardness** to **65%**. Click once to paint a circle on the new Layer, avoiding the model's face. Now change the size of the brush using the **[** or **]** keys, and click to make another orb. Repeat this around the image, but keep the effect subtle. When you have enough, change the Layer's Blending Mode to **Screen** and reduce the **Opacity** to **20%**. To complete the project, go to **File→Save As** and give your file a new name. Save your shot as a **JPEG** to share it online, or if you plan to come back and do more editing on the Layers, save it as a **Photoshop** (**PSD**) file.

ADD A TWIST OF COLOUR TO BUILDINGS



Inject a new feel into your architecture shots with this creative use of the Photo Filter

TECHNIQUE & PICS BY JON ADAMS

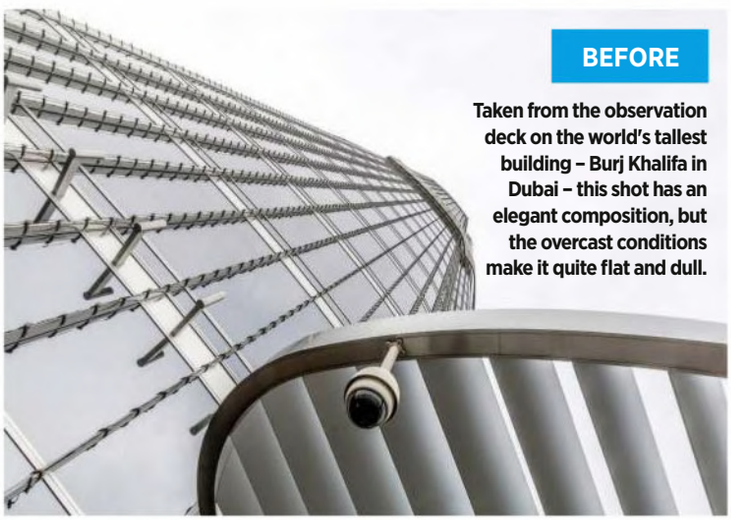
SKYSCRAPERS ADORN every major city, and give fabulous architectural shots if you can find the right angle. In terms of sheer height, nothing on the planet trumps Dubai's Burj Khalifa at 830 metres, but when I visited this incredible structure, the weather was dull and overcast. Creating a shot with a dramatic sky is quite straightforward to add more drama, but with such a well-photographed subject, the results still have a similar feel to pictures you've seen many times before. To give your own shots an entirely different look, this technique reveals how to employ a little artistic licence in creating a new vision. It involves the use of a few Filters, but uses one – the Photo Filter – in a far more creative way than normal.

At a glance

YOU'LL LEARN How to replace a sky, then add colour to a building and apply it to different areas using the Photo Filter
YOU'LL NEED Photoshop or Elements software
TIME REQUIRED 15 minutes
DIFFICULTY LEVEL Easy

On the disc

VIDEO LESSONS Watch as Jon runs through this entire technique on your computer screen.
START IMAGES The files Jon used are in the Start Images folder so you can try the technique for yourself. They're called *Burj.jpg* and *Burj Sky.jpg*



BEFORE

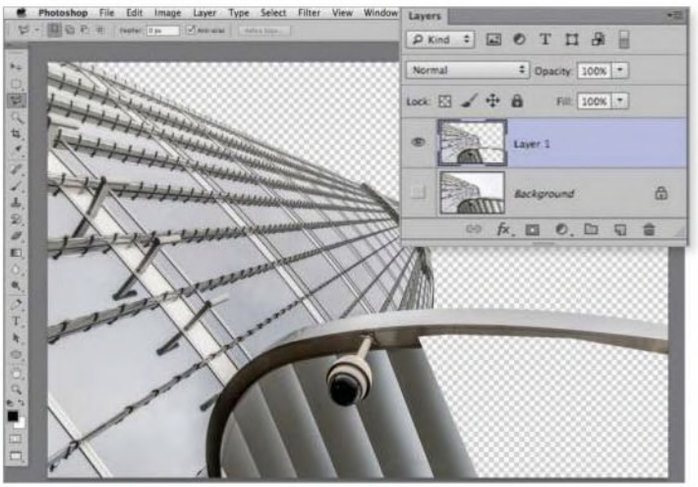
Taken from the observation deck on the world's tallest building – Burj Khalifa in Dubai – this shot has an elegant composition, but the overcast conditions make it quite flat and dull.





AFTER

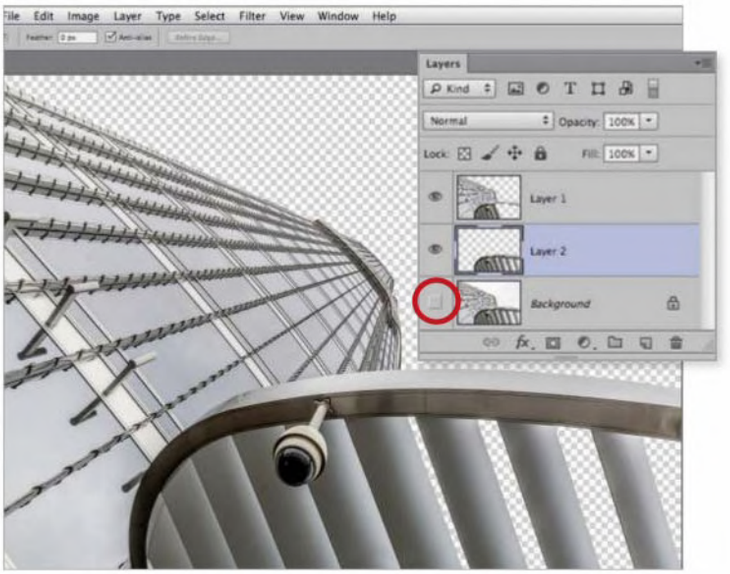
With a new sky, the image is improved, but it's the use of colour – courtesy of the Photo Filter – that makes it stand out from similar shots.



1 Open the pic and select the sky

In Photoshop or Elements, go to **File→Open** and find a skyscraper shot, or use *Burj.jpg* from the Start Images. Select the **Magic Wand tool**, and in the Tool Options bar set **Tolerance** to **15** and tick **Contiguous**. Click on the sky, then hold **Shift** and click on any unselected areas until they're included. With the sky selected, go to **Select→Modify→Expand** and enter a value of **1px**. Click **OK**, then go to **Select→Modify→Feather**, and enter **0.4px** before clicking **OK**. This will help the building blend in when you add a new sky.

Now hit **Ctrl+Shift+I** to select the building rather than the sky and hit **Ctrl+J** to punch it into a new Layer. With the **Polygonal Lasso tool**, click inside the curved section, taking in all the areas where the sky shows through the metal slats. You don't have to be too accurate – just take in the whole lot in one Selection and hit **Backspace** to delete this part of the Layer. Click the Background Layer's eye icon to switch it off and your cutout will look like the one above.



2 Select the curved area

You now need to select the curved section of the building. Switch the **Background** Layer back on and click on it to make it active. Zoom in tight with **Ctrl+Plus** and with the **Polygonal Lasso tool**, click around the curved section, staying right on the edge. Once you've clicked around the curve, continue all the way around the bottom of the image and back to your starting point. Click to close the Selection, then hold **Alt** and click around the first gap between the slats to remove it from the Selection. Do the same for the remaining gaps, holding **Alt** each time. When you're done, hit **Ctrl+J** to place this section of the building on its own Layer. Click the 'eye' icon alongside the **Background** Layer to switch it off again, and your building will be floating on a transparent background.

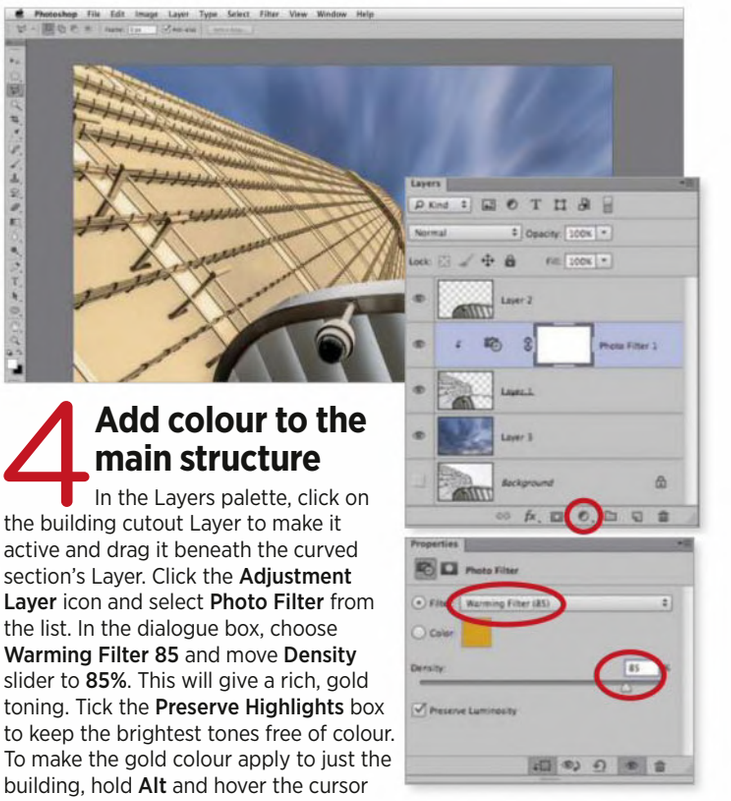


3 Replace the sky and add a blur effect

Open *Burj Sky.jpg* and hit **Ctrl+A**, **Ctrl+C** then **Ctrl+W**. Back on the main pic, hit **Ctrl+V** to paste in the sky. In the Layers palette, drag it underneath the building Layers to place the sky behind. Zoom back with **Ctrl+Minus**, then hit **Ctrl+T** to go into **Free Transform** mode.

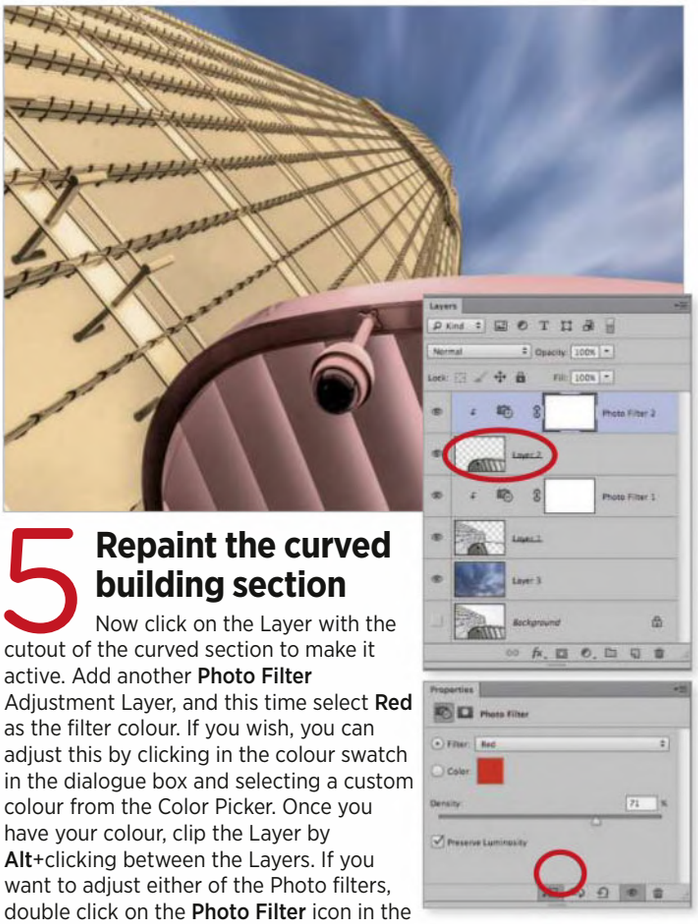
A bounding box will surround the image. Pull its corner handles outwards to make the dark part of the sky cover the background. Hit **Return** to confirm the changes to its shape. To give the sky a streaked appearance reminiscent of an ultra long exposure, go to **Filter→Blur→Radial Blur**. In the dialogue box, select the **Zoom** and **Good** options. Enter an **Amount** of **40** and click **OK**.





4 Add colour to the main structure

In the Layers palette, click on the building cutout Layer to make it active and drag it beneath the curved section's Layer. Click the **Adjustment Layer** icon and select **Photo Filter** from the list. In the dialogue box, choose **Warming Filter 85** and move **Density** slider to **85%**. This will give a rich, gold toning. Tick the **Preserve Highlights** box to keep the brightest tones free of colour. To make the gold colour apply to just the building, hold **Alt** and hover the cursor between the **Photo Filter** Adjustment Layer and the Layer beneath. When you see the cursor change, click. The Adjustment Layer will be clipped so it only affects the Layer beneath.



5 Repaint the curved building section

Now click on the Layer with the cutout of the curved section to make it active. Add another **Photo Filter** Adjustment Layer, and this time select **Red** as the filter colour. If you wish, you can adjust this by clicking in the colour swatch in the dialogue box and selecting a custom colour from the Color Picker. Once you have your colour, clip the Layer by **Alt**+clicking between the Layers. If you want to adjust either of the Photo filters, double click on the **Photo Filter** icon in the Layers palette and change the colour or density to suit your image.



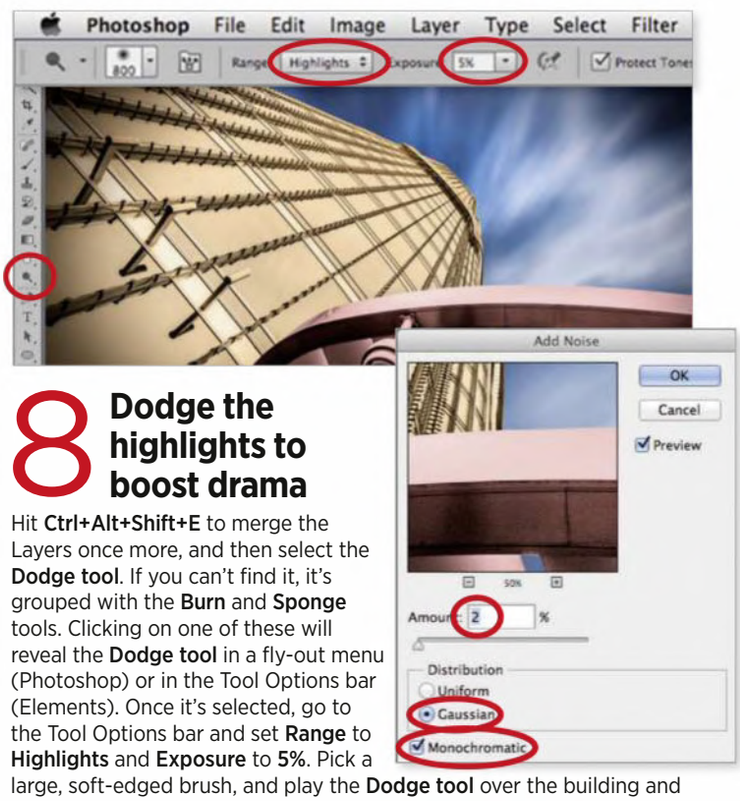
6 Darken the edges

Select the **Elliptical Marquee tool** and starting a little inside the top-left corner of the image, drag out an oval shape across the picture. If you need to adjust its shape or position, keep the mouse held down and then hold the **Spacebar** and drag. When the oval shape is as you want it, release the **Spacebar**, followed by the mouse. Go to **Select→Refine Edge** and set the **Feather** to **250px** to soften the edge. Now hit **Ctrl+Shift+I** the get the inverse of the Selection, and create a **Hue/Saturation** Adjustment Layer. Move the **Lightness** slider to around **-70** to darken the edges and create a dramatic vignette.



7 Apply a bleached effect to enhance contrast

Hit **Ctrl+Alt+Shift+E** to merge all the Layers into a new Layer at the top of the stack. Now hit **Ctrl+Shift+U** to desaturate this Layer. The image will turn to black & white, but this new Layer is going to be used to bleach the colours and add extra contrast. To make it happen, click where it says **Normal** and select the **Soft Light** Blending Mode. If you want a more dramatic effect, choose **Overlay** instead. You can now double-click on the **Photo Filter** Adjustment Layers and tweak the **Density** settings to fine tune the colours you've used. This will get them to look good alongside the contrast changes.



8 Dodge the highlights to boost drama

Hit **Ctrl+Alt+Shift+E** to merge the Layers once more, and then select the **Dodge tool**. If you can't find it, it's grouped with the **Burn** and **Sponge** tools. Clicking on one of these will reveal the **Dodge tool** in a fly-out menu (Photoshop) or in the Tool Options bar (Elements). Once it's selected, go to the Tool Options bar and set **Range** to **Highlights** and **Exposure** to **5%**. Pick a large, soft-edged brush, and play the **Dodge tool** over the building and sky to brighten the highlights and add extra drama to the image. To lock the entire image together, go to **Filter→Noise→Add Noise** and with **Gaussian** and **Monochrome** ticked, apply a small **Amount** of **2%**.

USE BLUR FOR ARTY SHALLOW FOCUS



Combine natural elements from different shots to create a new breed and produce an imaginative, eye-catching image

TECHNIQUE & PICS BY DAN MOLD

At a glance

YOU'LL LEARN How to get a shallow depth of field effect by blurring the background
YOU'LL NEED Photoshop or Elements
TIME REQUIRED 10 minutes
DIFFICULTY LEVEL Medium

On the disc

VIDEO LESSONS Watch as Dan walks you through this exciting imaging technique on your computer screen.
START IMAGES Dan used *Sharp portrait.jpg* to create this effect – you'll find the picture in the Start Images folder.

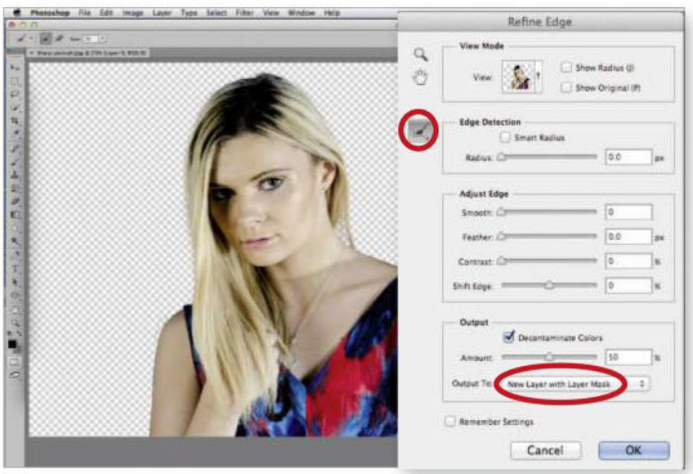
ONE OF THE MOST USEFUL FILTERS for photographers is a simple tool that's been in Photoshop and Elements forever. It's called Gaussian Blur and is found under the Filter menu. This filter diffuses the pixels in an image to create an out-of-focus effect. Although other Blur filters exist, Gaussian blur is so quick and simple to use that it's the first port of call when you want to blur part of an image. A fantastic application is to generate a shallow depth-of-field, which isolates a sharp subject against a diffused, blurry background.

This is the attractive effect that's created by using a large aperture setting on a camera's lens. It's particularly useful if your subject is too close to a background for any real blur to be revealed, or if you've taken a shot with too much depth of field in the first place. This is often the case if you've used a budget lens which doesn't offer a large enough aperture setting, or if you've taken a shot with a compact camera.

Compacts have very small sensors and very short focal lengths, and these two factors combine to give a much deeper zone of sharpness than you'd see with a DSLR or a CSC. When this technique is executed poorly in Photoshop, a blurry halo is left around the subject, and this is the tell-tale sign that a large aperture simulation has been carried out. In this step-by-step, we reveal how to do it with finesse, so your shallow depth of field effect will look as completely authentic!

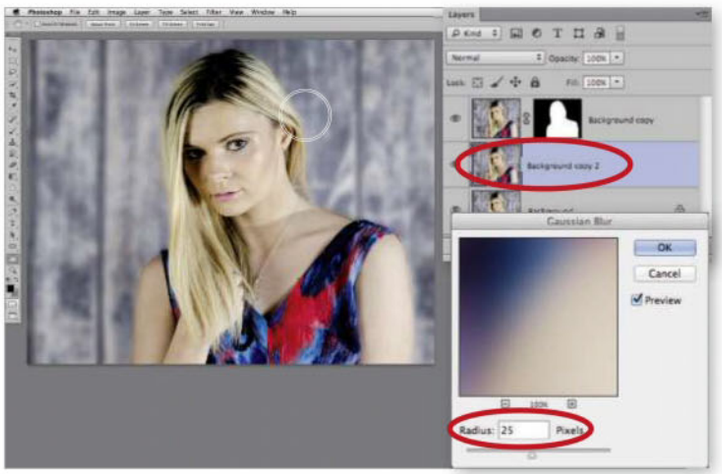


Taken using studio flash, the model is nice and sharp, but is too close to the background to give a good sense of separation. An aperture of f/9 was used, and this has produced a big enough depth-of-field to make the background nearly as sharp as the model. The shot would have worked more successfully with a larger aperture of f/2.8, as this would have thrown the background into a soft blur.



1 Open your pic and select the subject

Open a portrait with too sharp a background, or use *Sharp portrait.jpg* from the Start Images. To make an accurate Selection around the person, click on the **Quick Selection tool** and use the square brackets keys to set a medium-sized brush. Drag the cursor over the subject until they're selected. If you select some of the background, zoom in on the area (**Ctrl+Plus**), set a smaller brush and hold **Alt** while dragging to remove it. Now click the **Refine Edge** button and use the **Refine Radius tool** to paint over any strands of hair. When you have a good Selection, set the **Output to** box to **New Layer with Layer Mask**. Click **OK** and your cutout will appear with a Mask.

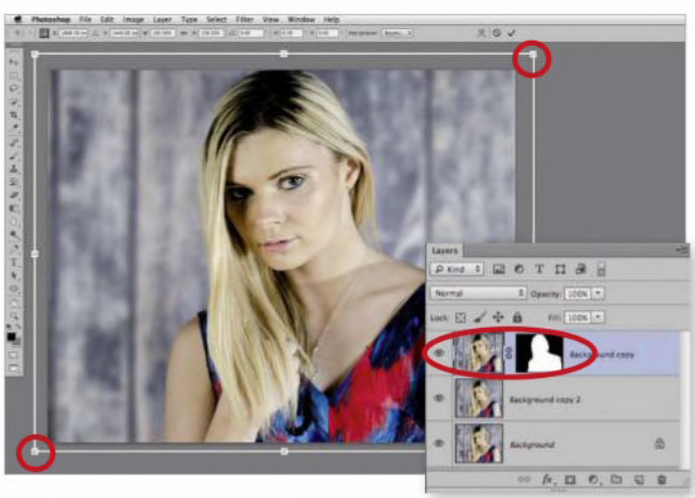


2 Add blur to the background

Click on the **Background** Layer and copy it to a new Layer by hitting **Ctrl+J**. Go to **Filter→Blur→Gaussian Blur** and increase the amount until the background looks nicely diffused and leaves the subject separated in its own sharply-focused space. On the example image a setting of **25px** was used, but you may need more or less for your own images. This is the point where many people stop, but the blurred halo around the subject is unnatural as it would never happen with a fast aperture lens. As a result, this needs to be hidden or removed to get an authentic, shallow focus effect.

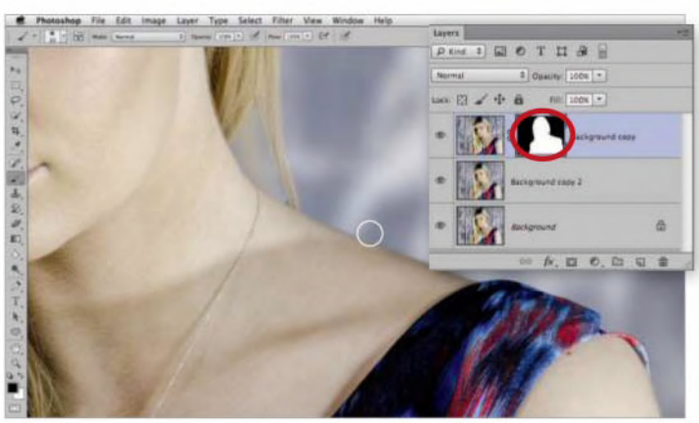
AFTER

The background has been blurred to give an artistic, shallow depth-of -field effect similar to that obtained with a large aperture lens.



3 Enlarge the subject to cover the halo

The easiest way to get rid of the blurry halo is to enlarge the subject to cover all traces of it. To do this, click on the top Layer with the Mask and hit **Ctrl+T** to go into **Free Transform** mode. In Photoshop, pull the corner handles outwards while holding **Shift** to enlarge the subject in proportion. If you're using Elements, tick the **Constrain Proportions** box in the Tool Options bar before pulling the handles. To move the enlarged subject, just drag inside the bounding box. When you've positioned the subject to hide the blurred halo, hit **Return** to confirm the change in size.



4 Clone out problems & tidy the Mask

Check carefully around the edge to see there are no problems. If any subject blur remains, use the **Clone Stamp tool** to remove it. To do this, select the tool, then click on the middle Layer (the blurred background) to make it active. Now hold **Alt** and click on a clean part of the background to sample it, then release **Alt** and paint over the blurred halo to remove it. Keep changing your sample point to ensure a seamless finish. Once you're satisfied with the effect, Zoom in and check your subject's outline. If the cutout needs tidying, click on the Layer Mask thumbnail in the Layers palette and paint black or white to hide or reveal the sharp subject. Once you have a top quality result, go to **File→Save As** and save the file under a new name as a maximum quality JPEG.

DISCOVER THE FILTER GALLERY



Unlock some of Photoshop's most powerful features by viewing and stacking different Filter effects

TECHNIQUE & PICS BY ANDY HEATHER

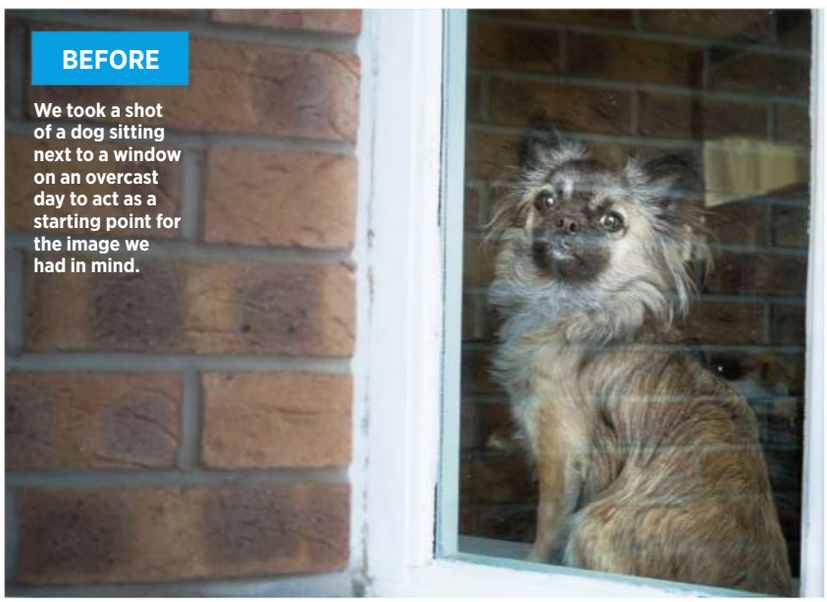
PHOTOSHOP'S FILTERS ARE THE KEY to many advanced editing and creative effects, and the Filter Gallery offers easy access to 47 of them, making it the gateway to pro-level imaging.

We are often told that when it comes to truly creative photo manipulations, Photoshop is still the professionals' go-to application. One of things that separates Photoshop and Elements from other editing applications like Lightroom is the ability to make complex transformations and to introduce all-new, artificial elements into shots. Many of these advanced effects are applied through Photoshop's amazing repertoire of filters, and the Filter Gallery is the easiest way to preview and apply these.

The advantages

If you know exactly which filter you want to use, the Filter menu is usually the most direct route to applying it. However, if you're not sure exactly which effect is going to fit the bill, the Filter Gallery is helpful, because it allows you quickly to preview each filter in turn. This makes Photoshop filters more flexible, more user-friendly, and easier to compare.

Even better, the Filter Gallery is also an editing window that allows you to combine multiple filters at once in a variety of permutations to produce effects you never would have thought possible. By stacking filters and changing their order you can experiment to your heart's content, creating a vast number of filter combinations. This results in post-processing effects which can be either subtle or utterly transformative. Whatever changes you make to your image in the Filter Gallery, you are only looking at a preview, so your original image won't be affected unless you hit the OK button to apply them.



The Filter Gallery enables you to create effects by stacking filters in unexpected combinations



At a glance

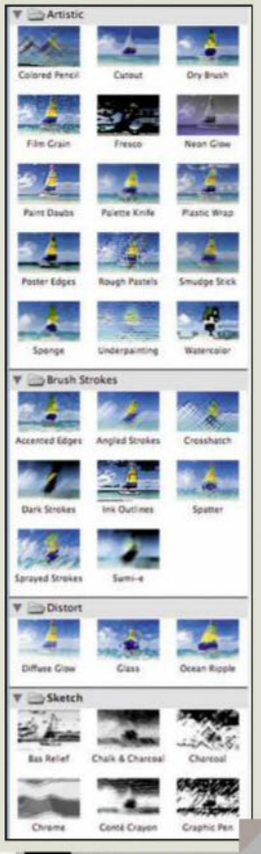
YOU'LL LEARN How to create a condensation effect by stacking different filters in Photoshop's Filter Gallery
YOU'LL NEED Photoshop or Elements
TIME REQUIRED 15 mins
DIFFICULTY LEVEL Medium

On the CD

VIDEO LESSONS Watch as Andy runs through this highly creative technique step by step on your computer screen.
START IMAGES The finished image was created from a single shot, which is located in the Start Images folder. It's called *Dog.jpg*.

Understanding the Filter Gallery dialogue

With an image on screen, open the Filter Gallery by navigating to **Filter→Filter Gallery...** and familiarise yourself with its features. We've listed all its core functions right here.



PREVIEW WINDOW

This is a preview of your shot with the selected Filter(s) applied. By default it magnifies your shot to 100%. To fit the image to the preview window, hit **Ctrl+0** (zero).

FILTER PALETTE

Effects in this stack can be dragged into any order. Changing the order of the Filters will change the effect that's created.

CANCEL OR RESET

Pressing the **Cancel** button closes the Filter Gallery. If you want to return the sliders to their defaults and keep editing, hold down the **Alt** key and the **Cancel** button will be turned into a handy **Reset** button.

FILTER CONTROLS

These sliders let you adjust settings such as the strength, size, lightness, etc, of the selected filter.

OK BUTTON

Clicking **OK** will close the Filter Gallery and apply the selected filters and effects to the original image.

PREVIEW ZOOM CONTROLS

The + and - symbols allow you to zoom in and out of the preview in steps. The triangle symbol opens a drop-down menu with a range of zoom options to choose from.

FILTER THUMBNAILS

Each of the 47 Filters has a thumbnail preview and is organised into Filter categories. Click on any of the 47 filters to see a live preview of the effect in the preview window on the left.

FILTER VISIBILITY

The 'eye' icon next to each Filter can be used to toggle the visibility of the effect on and off.

NEW EFFECT LAYER BUTTON

This button allows you to preview another Filter in combination with the first. The effects appear in a stack, much like in the Layers palette. You can add multiple filters, which you can then edit or delete later.

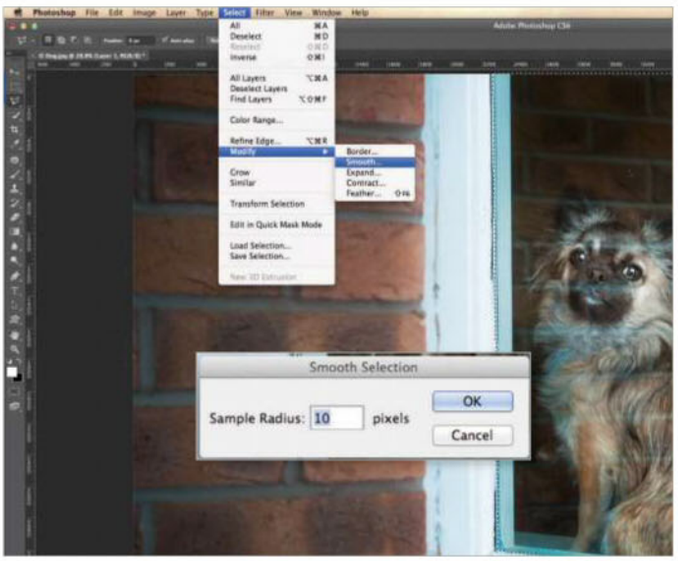
USING THE FILTER GALLERY TO CREATE EFFECTS SELECTIVELY

Stacking filters in the Filter Gallery can be a great way to produce special effects, but these effects don't have to be applied globally across the whole image. In this tutorial we're going to show you how to use a combination of different Filters, and then apply them so the result only affects a particular area within a shot.

A time-saving way to do this is to make a Selection of the area you want to affect before you open the Filter Gallery. We'll do that here, and use the Filter Gallery's features to add digitally-generated condensation to glass to give a moody feel.

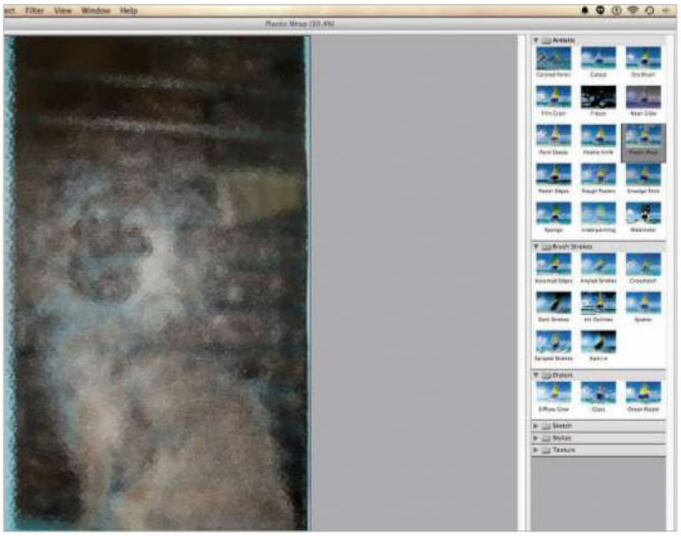
This effect is created using three stacked Filters, so following the steps is a great way to familiarise yourself with the Filter Gallery's option of combining different Filter effects together.

We'll walk you through how to do it with a cute pooch as our model photo, but remember that this technique will work just as well with any portrait framed in a house window and taken from outside. Practise the technique with the shot supplied, but once you're comfortable with the process be sure to apply the same effect to your own shots!



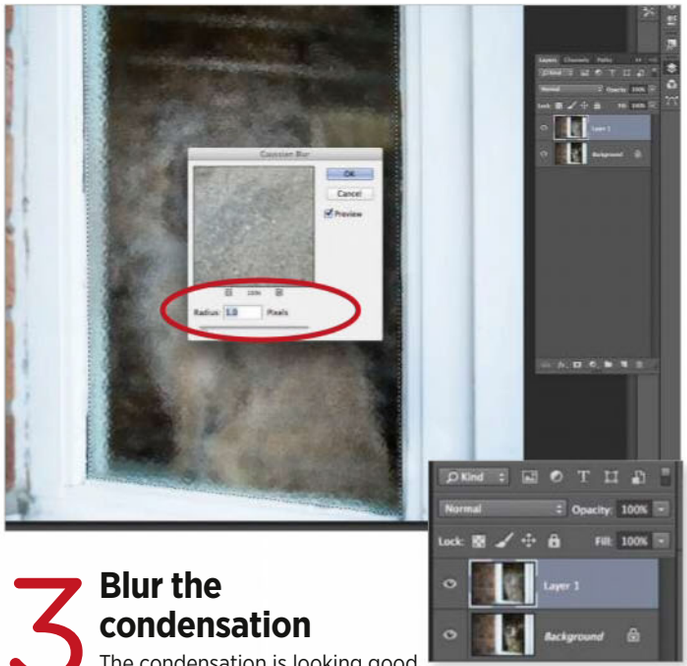
1 Open the image and select the window

Open *Dog.jpg* into Photoshop or Elements. Select the **Polygonal Lasso tool** (you can press **L** repeatedly to cycle between the three Lasso tools). Click around the window and when you get back to where you started, click once to close the path and create a selection. Smooth out the sharp edges by going to **Select→Modify→Smooth** and set the **Sample Radius** to **10px**. Next, soften the edge of the Selection by going to **Select→Feather** and setting the **Feather Radius** to **10px**. This will make the condensation effect you're going to apply fade out naturally around the edges.



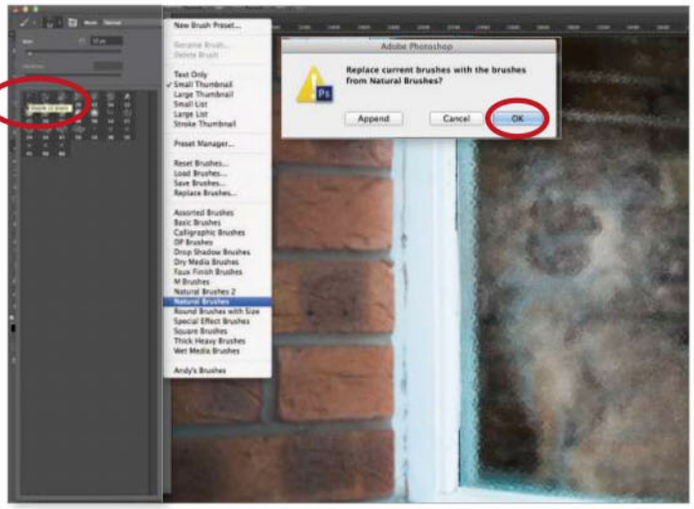
2 Create the condensation effect

With your window still selected, go to **Filter→Filter Gallery**. In the dialogue box, go to the **Distort** category and select **Glass**. Set **Distortion** to **20**, **Smoothness** to **12**, **Texture** to **Frosted**, **Scaling** to **100%** and make sure that **Invert** is ticked. Next, create a New Effect Layer by hitting the **New Effect Layer** icon at the bottom right-hand side of the dialogue box and select the bottom layer in the stack. Navigate to the **Brush Strokes** category and select **Spatter**. Set **Spray Radius** to **25** and **Smoothness** to **3**. You've made a start, but the effect is still a bit too 'wet' and not misty enough. To make the condensation brighter and more diffused, create another **New Effect Layer** by clicking on the icon. Drag the new layer to the bottom of the stack. Navigate to the **Artistic** category and click on **Plastic Wrap**. Set **Highlight Strength** to **20**, **Detail** to **12** and **Smoothness** to **7**. Hit the **OK** button to close the dialogue box.



3 Blur the condensation

The condensation is looking good, but it's still a little too sharp to look natural. You'll need to soften it so it looks a little mistier and matches the sharpness of the window in the shot. With the window Selection still active, go up to **Filter→Blur→Gaussian Blur**. Use a **Radius** of **1px** to keep the effect subtle. Now you've got your artificial condensation, you need to wipe some of it away. The most versatile way to do this is with a layer mask. Hit **Ctrl+D** to deselect the currently selected area. Next, click on the **Add layer mask** button at the bottom of the Layers palette in Photoshop and at the top of it in Elements. Painting with black in this Mask will hide the pixels on this Layer, allowing the original shot below to show through.



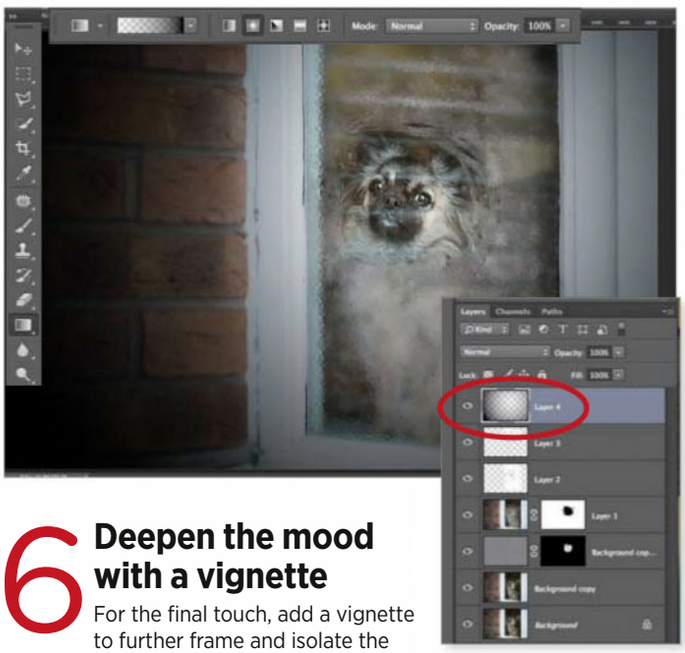
4 Wipe away part of the condensation

Hit the **B** key to select the **Brush tool**, then choose a brush with wide bristles. In both Elements and Photoshop, a good option is called **Stipple 12 pixels**. In Elements it's located inside the **Natural Brushes** folder. In Photoshop, click on the icon at the top-right corner of the **Brush Presets Picker** to open the flyout menu. From that menu, select **Natural Brushes**. Photoshop will ask you if you want to replace the current set with the Natural Brushes set. Click **OK** and you'll find the **Stipple 12 pixels** brush at the top of the list. With black as your foreground colour and with the Layer Mask still selected, paint into the Mask so it looks streaky, as if someone's wiped away the condensation from a small part of the window.



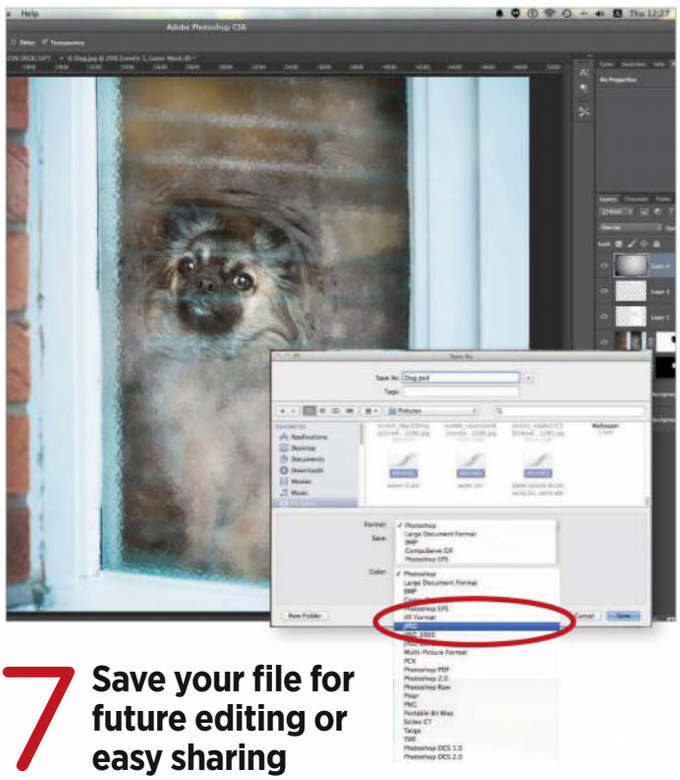
5 Make it misty

Your Filter work is complete, so now it's time to add the finishing touches. Start by making the window look a little mistier. Create a new Layer (**Shift+Ctrl+Alt+N**) and select the **Brush tool** (**B**) again. Open the **Basic Brushes** set the same way as you opened the Natural Brushes set in the last step, and select a soft, round brush. With white as your foreground colour, click on the window around the dog to make it look white and misty. Change the new Layer's Blending Mode to **Soft Light**. Create another new Layer and paint a little more white into the top of the window where it's darker. Change the Blending Mode to **Soft Light** again.



6 Deepen the mood with a vignette

For the final touch, add a vignette to further frame and isolate the subject. Do that by creating a new Layer (**Shift+Ctrl+Alt+N**) and selecting the **Gradient tool** (**G**). Hit the **D** key to return your foreground and background colours to their default values of black and white, respectively. In the Tool Options bar, select the **Foreground to Transparent** option and make sure that **Reverse** is ticked. Drag a line from the dog's face towards the bottom-left edge of the frame to draw a radial gradient. Change this Layer's Blending Mode to **Overlay** and set the **Opacity** to **20%** to complete the effect. Now the centre of the image is brighter than the edges, meaning the viewer's eye will be drawn toward the subject. Also, by darkening the shot overall we've added to the dour mood of the shot, which emphasises the dog's yearning to go outside and play.



7 Save your file for future editing or easy sharing

The last step is to save your shot in an appropriate format. Go up to **File→Save As** and give your creation a new name. If you plan to return to the image to continue editing it in the future, select the **Photoshop (PSD)** format, as this will keep your Layers intact and won't compress the image, meaning the image quality won't be affected. If you'd like to share the image online or by email, choose the **JPEG** format. This'll merge the layers and compress the image, resulting in a smaller file.

ENHANCE YOUR RAW SCENICS



Take full control of the tones and colours in your images to give your photographs a boost

TECHNIQUE & PICS BY BEN DAVIS

THE BEAUTY OF WORKING with RAW files is their flexibility. After all, it's literally just 'raw' sensor data, and with no important parameters fixed in place, you have a much greater scope for adjusting your images.

Sometimes the shots we capture are riddled with imperfections. Wonky compositions, muddy tones and dull colours. The latter is especially a problem when filters have been used. The start image below was taken with a 10-stop Neutral Density filter. This allowed a long exposure of 30secs, but resulted in poor colours.

All of these problems can be fixed and enhanced using the tools on offer in the latest versions of Lightroom (and Photoshop CC). It's quick and easy, and by following this tutorial you'll learn the tips and tricks that will improve your own images.

At a glance

YOU'LL LEARN How to process and adjust a RAW file so you can refine the image, control contrast and enhance colours
YOU'LL NEED Lightroom 5/CC or Photoshop CS6/CC
TIME REQUIRED 15 minutes
DIFFICULTY LEVEL Medium

On the disc

VIDEO LESSONS Watch as Ben runs through this absorbing Lightroom technique on your computer screen.
START IMAGE Try out the project yourself using the *Cove.dng* RAW file. The picture can be found in the Start Images folder.



This coastal landscape of Lulworth Cove in Dorset is a pretty view, but the horizon is wonky, the tones are flat and the colours look muddy as a result of the Neutral Density filter used over the lens. But all these issues are easy to fix in Lightroom.





AFTER

By using the tools and controls on offer in Lightroom, it's easy to enhance the colour and contrast in a landscape.

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Joe Cornish – Smooth Cotton 300
I aim to crystallise the endlessly varied light, colours and texture of nature in my landscape photographs. At the end of a chain of photographic processes, the print is the culmination and fulfilment of that effort, and the paper is critical to the success of the print. Fotospeed's Smooth Cotton 300 is my paper of choice.



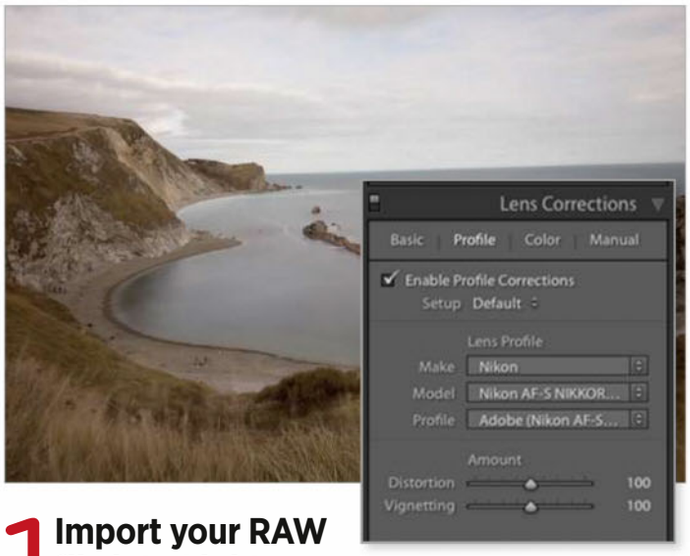
Trevor & Faye Yerbury – Natural Soft Textured Bright White 315
As traditional darkroom printers it has taken us many years to discover the right paper for our digital images that will capture and hold all of the shadow and highlight detail we demand. Natural Soft Textured Bright White is our preferred paper.



John Swannell – Platinum Baryta 300
As a photographer I aim to capture the spirit of my subject. While technology has changed over the years the one thing I feel remains the same is the importance of the printed image. Fotospeed's Platinum Baryta bridges the gap between the traditional darkroom papers and todays digital media. I find that whilst it is known for reproducing superb B&W images it should never be under estimated as a paper for colour work.



Charlie Waite – Platinum Etching 285
Landscape photography is much about discovery and photographers can only fully relish the rewards of their efforts when seen in the form of a print. The paper used for that print has to be as carefully considered as the image made. Discovering Fotospeed's Platinum Etching 285 has been a revelation to me and has proved a vital tool in my ongoing quest to match pre-visualisation with end result.



1 Import your RAW file into Lightroom and apply Lens Corrections

Open your RAW file in Lightroom, or use *Cove.dng* from the Start Images folder. Click the **Import** button at the bottom left of the **Library** module, and navigate to the location of your file. Select **Copy** from the top, choose a **Destination** for you image, which is where it will be stored, and then click **Import**. Once it has been imported, click on the **Develop** module at the top to enter the editing mode. Scroll down to **Lens Corrections**, and within **Basic** make sure you tick **Enable Profile Corrections** and **Remove Chromatic Aberration**. Under **Profile**, check that the correct lens has been detected by Lightroom. If you're using the Start Image, it should be a **Nikon AF-S 24-70mm f/2.8G ED** lens. If you're using your own image, check that the lens profile matches the optic you used.



2 Straighten the horizon with the Crop tool

Select the **Crop Overlay** from the Toolbar (or press **R** for a shortcut), and click on the **Angle tool**. Click and drag the tool across the horizon, and let go once you've reached the edge of the frame. This will automatically rotate your image to set the horizon dead level. To adjust the size of your crop, click and drag on the edge handles of the bounding box, until you are happy with the framing. In the example image we cropped a bit off the bottom of the frame. Once satisfied, click **Done** to exit the **Crop Overlay** tool.



3 Set the Contrast, Tone & Presence

Open up the **Basic tab** and increase the **Exposure** to **+0.65** and push **Contrast** to **+20**. Pull **Highlights** to **-100** and push **Shadows** to **+100** to reveal more detail in those areas. Shift **Whites** to **+40** and drag **Blacks** to **-30,** while holding **Alt** to see a Clipping Mask. Adjust the **Clarity** slider to **+50** - this enhances micro-contrast to boost detail. Then set **Vibrance** to **+30** and **Saturation** to **-10** to boost the more muted colours.



4 Add drama with a Grad Filter

Open the **Graduated Filter** from the Toolbar (press **M**), click **New** and double-click **Effect** to reset all the sliders. Pull **Exposure** to **-0.90**, **Highlights** to **-35**, **Clarity** to **60**, **Saturation** to **50** and **Sharpness** to **-35**. Hold **Shift** while you click and drag the Graduated Filter to the horizon to keep it straight. Press **O** to see a red Mask overlay. If you're using Lightroom CC, click on **Brush**, select **Erase** and tick **Auto Mask**, and paint out any headland under the filter. Click **Done** to exit the tool.

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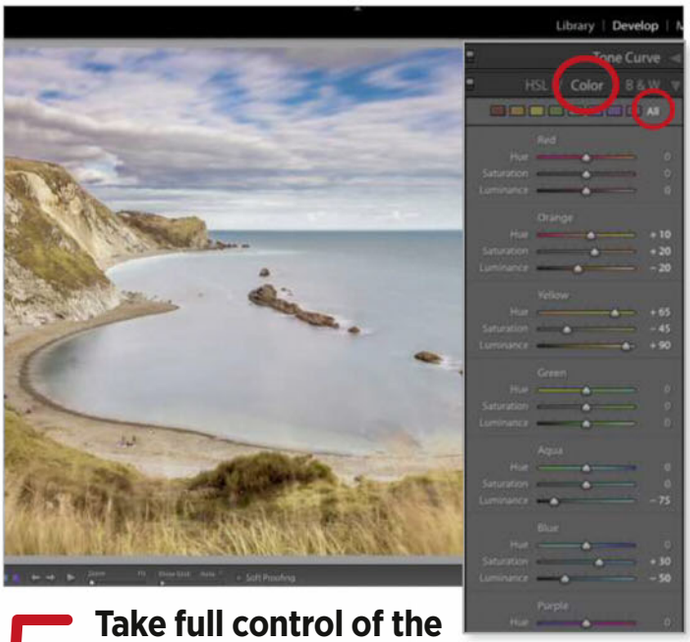
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5 Take full control of the colour in the Adjustment tab

Head to the **HSL/Color/B&W** tab, click on **Color** and select **All**. Here you can control the tint, intensity and brightness of 8 colour channels. To get a good idea of which parts of your image will be most affected, give the **Luminance** slider for each colour channel a good push and pull to see what happens. For the Start Image, in the **Orange** tab the **Hue** was set to **+10**, **Saturation** increased to **+20** and **Luminance** reduced to **-20**. For **Yellow**, **Hue** was set to **+65**, **Saturation** to **-45** and **Luminance** to **+90**. Pull the **Aqua Luminance** slider to **-75**, and for the **Blue** channel set **Saturation** to **+30** and **Luminance** to **-50**. Go back to the **Basic** tab and set **Temp** to **5470**.



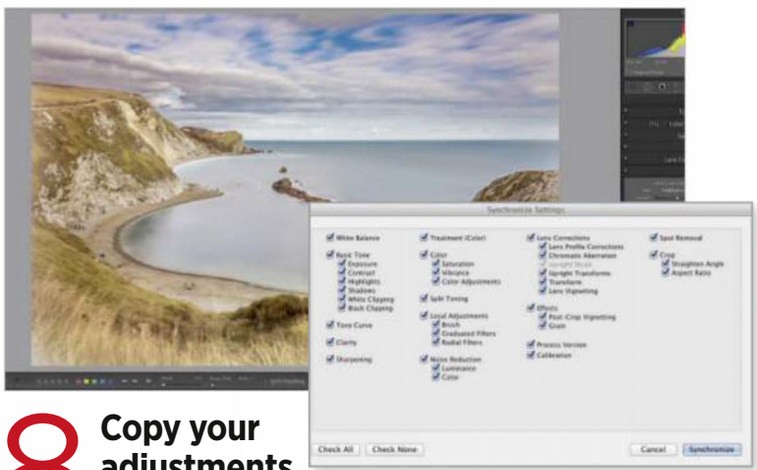
6 Control Noise and Sharpening in the Detail tab

Open the **Detail** tab and use the **Target** tool to select a detail zoom area, so you can monitor the sharpening effect. Push the **Amount** slider to **100**; this controls the overall amount of sharpening applied. Hold **Alt** as you push the **Masking** slider to see an edge mask of the areas affected by the sharpening. Here, the white areas have sharpening applied. In the example pic **Masking** was set to **85**. Under **Noise Reduction**, set the **Luminance** slider to **12** to smooth out some of the grain.



7 Add a vignette in the Effects tab for a more artistic finish

Click on the **Effects** tab and under **Post-Crop Vignetting**, set **Style** to **Highlight Priority** from the drop-down menu. Pull the **Amount** slider to **+15** to set a lighter border to the edge of the image. Set **Midpoint** to **35** and **Roundness** to **-80** to create a squarer frame to the vignette. Adjust the **Feather** slider to **100** – this will soften the edge of the vignette. Hold the **Alt** key as you adjust these sliders to more clearly see the effect. The lighter edging to the frame adds a summery vibe to the image.



8 Copy your adjustments to other images and Export your file

To copy the adjustments you've just made to any similar shots in your library, make sure the current image is open and then hold **Ctrl** while clicking to select them in the thumbnail bar. The **Previous** button will now say **Sync**. Click this to open the settings window, click **Check All** to choose all of the settings to copy, then click **Synchronize**. To complete the image, you'll need to export it. This creates a new version of the file with all of your adjustments embedded, leaving the original RAW untouched. Go to **File→Export** to open the **Export** dialogue box. Within **Export Location** select the destination for saving. Use the options to give it a **Custom** name, then select **JPEG** from **Image Format**, and set **Quality** to **90**. Click **Export** at the bottom right and you'll create your new version.

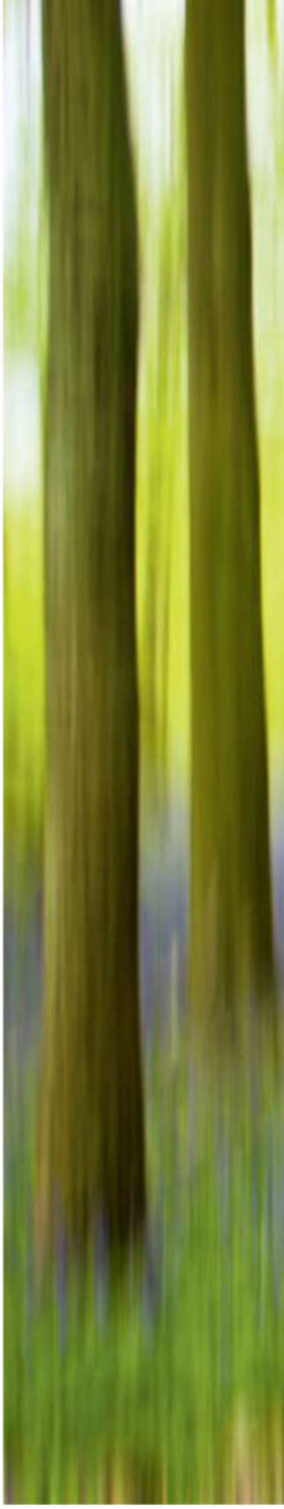
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Your experts




***Digital Photo*'s technical editor, Dan, and assistant editor, Matty, are on hand to help with insightful shooting and editing tips. To have your work shown and assessed in *Your Pictures*, email a selection of no more than five images to the address on the left, and put *Your Pictures* in the subject box.**



BLUEBELL WOODS
by Russell Deer

Camera Canon 400D & 18-55mm lens **Exposure** 1/15sec @ f/5.6, ISO 400 **Software** Photoshop



I have over 5000 photos and this is the first time someone else will actually be looking at any of them! My photo was taken at Ashridge Park, Hertfordshire, in April 2015. I used my camera's Landscape Scene mode to get the shot, and then used the Landscape Effects Kit for Photoshop that was supplied with the April 2015 issue of the magazine. I felt inspired after reading this issue, and can't stop using it!

MATTY SAYS "First of all, well done to Russell for sending his picture in for assessment. As you know, we love photography and want everyone to get the best out of this wonderful hobby we share. What's more, we don't bite, so all you'll get is constructive criticism, and ideas on improvements you could make.

"I really like the way Russell has composed this shot. The winding path takes the eye through the scene, and is elegantly framed by the trees. The tree stump in the foreground is perhaps a little small and low in the frame, but it adds an element of interest to grab the viewer's eye. Moving closer to this and using a slightly lower angle would help balance the scene a bit better, but the main issue here is sharpness. On closer inspection, the scene isn't sharp at any point. This isn't a result of focusing error, but is down to the photographer's old enemy – camera shake.

"When you take a shot, the camera has to be absolutely still for as long as the shutter is open to record the exposure. If the camera moves during this time, then the movement will be recorded onto the sensor as blur. You can always tell that camera shake is the cause because it the blurring or ghosting effect will appear on edges all over the scene.

"Russell used a shutter speed of 1/15sec to take this shot, and that's a bit too slow for the focal length used. By increasing the ISO setting, you'll speed up the shutter, and this is the safest way to ensure you get sharp shots when handholding.

"A blurred image is something that can't really be fixed after the event, and the only true cure is a reshoot. This won't be possible until next May when the bluebells are in bloom, but provided you're happy to accept a bit of artistic licence, there's a great Photoshop technique that will transform this scene into a really evocative image. It actually emulates a technique you can create in-camera (see page 52), so the resulting image isn't too far removed from a pure shooting technique.

"With the pic open in Photoshop, copy the Background Layer by hitting **Ctrl+J** and then go to **Filter→Blur→Motion Blur**. With the angle set to **90 degrees**, increase the **Distance** slider until you have a vertical, streaky effect that retains the form of the pic but loses the definition. This recreates the blurring effect caused by moving the camera during a long exposure. The amount used varies depending on the size of the image, but **200px** is a good starting point.



AFTER

By applying a Motion Blur filter effect, the camera shake on Russell's original is disguised and an arty camera effect is created.

"With this done, I'd then brighten the pic using a **Levels** Adjustment Layer as it's a little underexposed on the original. Click on the **Adjustment Layer** icon in the Layers palette and choose **Levels** from the list. Then move the middle and right hand sliders under the Histogram to the left to brighten up the picture.

"The final tweak would be to add some extra warmth to make the rather cool colours more inviting. This can be done in a variety of ways, but another **Levels** Adjustment Layer makes it quick and easy (see panel on the right).

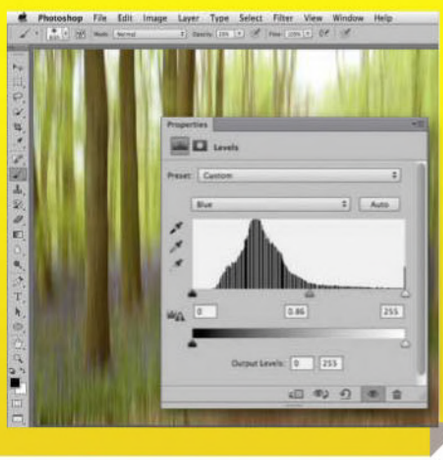
"After these changes, the camera shake is no longer an issue, and the result is an artistic, impressionist-style scene, reminiscent of a painting. It's very different to the original, and is more of a reinvention than a subtle enhancement, but I think it transforms Russell's woodland shot into something with bags of impact."

Expert advice Adding warm-up effects using Levels

Warm-up effects used to be added at the time of capture by placing a straw-coloured filter over the lens, but nowadays, it's easy to emulate the same look in Photoshop or Elements.

To do it, click on the Adjustment Layer icon in the Layers palette and select Levels from the list. In the palette, click on where it says RGB and select Red.

Move the middle slider under the Histogram a little to the left and you'll introduce a red colour cast. Now select the Blue Channel. This time, move the middle slider a bit to the right. Yellow is the opposite of blue, so this adds yellow to the colour mix, giving an attractive, amber-coloured warm-up effect.



AFTER

Revealing detail in the shaded side of the figure and removing some distracting stones makes a very impressive shot even better.

ONLY THREE MORE MILES TO GO

by David Scott

Camera Nikon D5200 **Exposure** 1/640sec @ f/6.3, ISO 200 **Software** Photoshop



I was walking through a village while on holiday in Burma and saw this lady on a long trek to fetch water. I tried shooting head on, but then changed position and captured her walking away. This made the sun cast shadows behind her. In Photoshop I made a small crop to tighten the picture and boosted the saturation.



MATTY SAYS "This is a fantastic shot. The backlighting on the subject separates them nicely from the background, and the large aperture of f/6.3 lets the distant parts of the scene fall off into a gentle blur. Even better, David has cleverly made the girl's shadow a key part of the composition. The framing is beautifully balanced, and considering we're seeing the back of a subject, I think it's a surprisingly powerful shot.

"It doesn't need much at all in the way of improvement, but there are a few subtle tweaks that could enhance it even more. Firstly, clone out some of the minor distractions on the dusty track. Although they're a natural part of the scene, removing some of the stones helps to focus attention fully on the figure and shadow. The best way to do this is to create a new, blank Layer above your **Background** Layer. Next, select the **Spot Healing Brush**, and with **Sample All Layers** ticked in the Tool Options bar, simply paint over the more prominent stones that catch your eye. When you've finished, you can toggle the new Layer off and on with the 'eye' icon to see the difference.

"After that flatten the image, then use the **Quick Selection tool** to select the figure. Once she's surrounded by 'marching ants', click the **Refine Edge** button in the Tool Options bar and increase the **Feather** slider to soften the edge. With this done, brighten the shaded areas using the **Shadows/Highlights** command. Setting the **Shadows** slider to about **30** will reveal a little more detail in the darker tones.

"The final step would be to add a little extra warmth to the shot. It's clearly hot and dusty, but the colours are quite neutral. By adding a warm-up effect, you'll restore some heat to the image. A convenient way to do this is by creating an Adjustment Layer and choosing **Photo Filter**. Pick the **Warming 85** option, and increase the **Density** slider to add instant warmth. The shot was already good, but I think these minor changes make it great!"

SPEED OF LIGHT
by Alexandre de Sousa

Camera Canon EOS 1100D & Sigma 10-20mm f/4-5.6 EX DC
Exposure 30secs @ f/14, ISO 100 **Software** Lightroom 5



I wanted to capture the bright lights and reflection of the Ponte 25 de Abril, the oldest bridge in Lisbon. My greatest challenge was the framing, but I used a tripod to compose and took a long exposure. In post-processing I cropped in a little and tweaked the colours.

DAN SAYS "This is a great low light shot packed with atmosphere. I love the strong lines and shapes which contrast nicely with the bright lights on the bridge and the Lisbon backdrop. Alexandre used a small aperture of f/14 to get a long, 30secs exposure – this blurred the water and also captured a brilliant light trail from the streaming traffic. The narrow aperture has also resulted in a sparkling starburst effect on the bridge lights which adds extra points of interest.

"Wide-angle lenses are great for vast spanning vistas, but I think this shot is a little *too* wide. The tree in the corner is a nice idea as it helps to provide context, but I think cropping it out altogether would deliver an even stronger composition. With the **Crop tool** active in Photoshop you can select the **Rule of Thirds Overlay** in the Tool Options bar. A crop can then be drawn over the image and the nearest 'peak' of the bridge can be positioned on the right-hand third line. The crop overlay can also be moved so that the horizon sits on the bottom third. Once this is done, hit **Return** to apply the crop. The benefit of this crop is that the key elements are placed on the powerpoints of composition. To further tidy the image, there are a few remaining distractions which can be cleaned up (see Expert Advice panel on right).

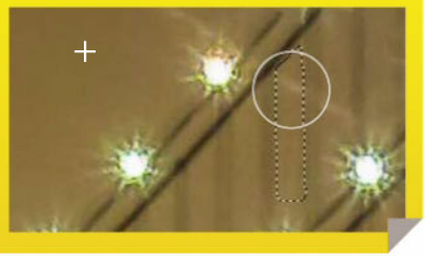
"The street lights are emanating a golden warmth, but the sky looks a little flat as the pic has been taken after the 'blue hour'. Although it's defined as an 'hour', this window of opportunity only lasts around 30-40 minutes, and covers the period after the sun has set down when there is still colour in the sky. A good option to escape the flat sky would be to convert it to mono (**Ctrl**+**Shift**+U is the quickest way in Photoshop). Black & White images have a timeless quality, and that perfectly suits this age-old landmark.

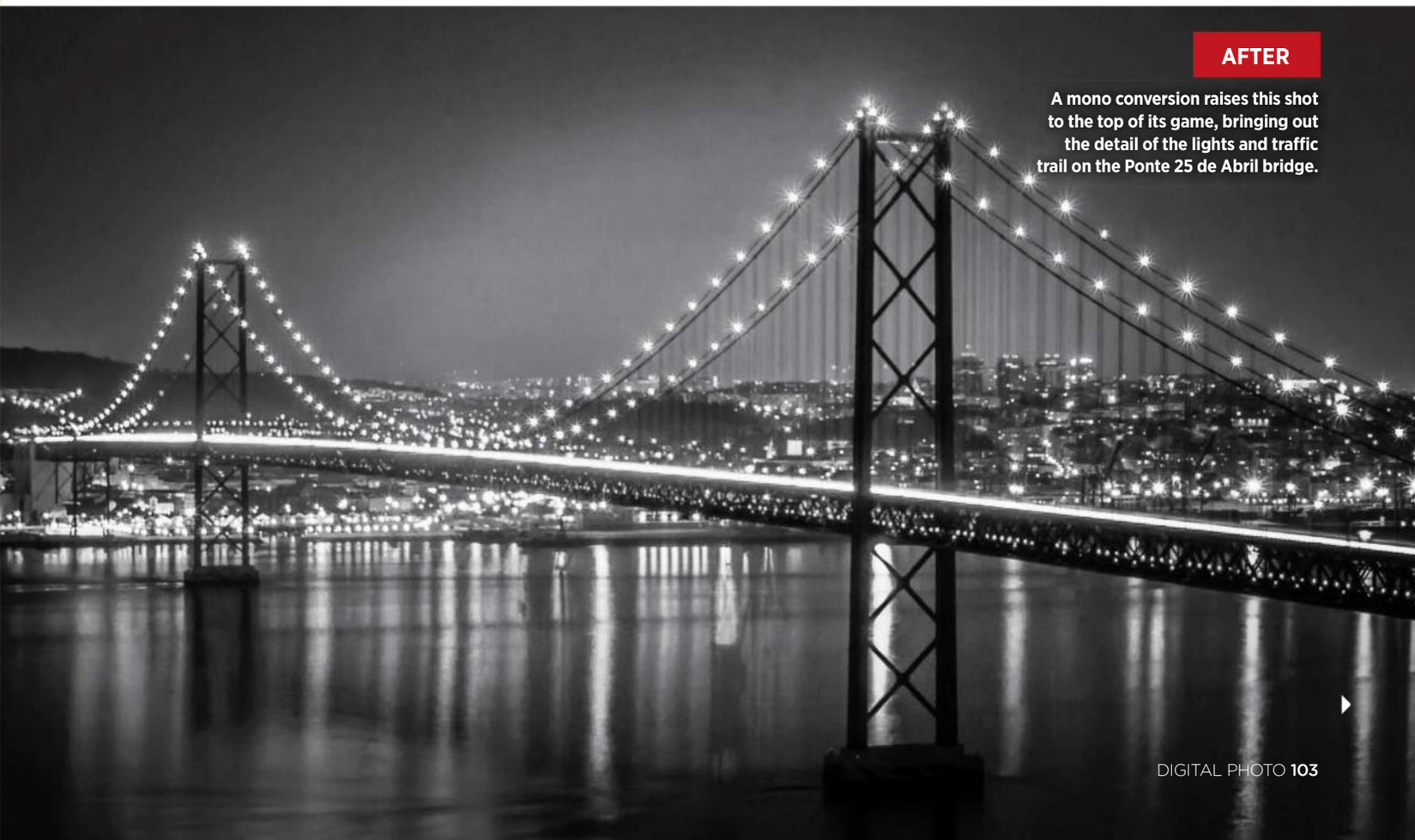
"To make the sky more dramatic in the mono version, it's easy to add a vignette. This will create the illusion that light is pouring over the horizon. In the Layers palette (**Window→Layers**), click on the **Adjustment Layer** icon and choose **Levels** from the list. Drag the middle **Midtones** slider to the right a little to darken the pic. Then with a soft black brush, paint over the middle so that only the corners remain darkened. This helps draw the viewer's eye to the heart of the pic."



Expert advice Clean up distractions in Photoshop

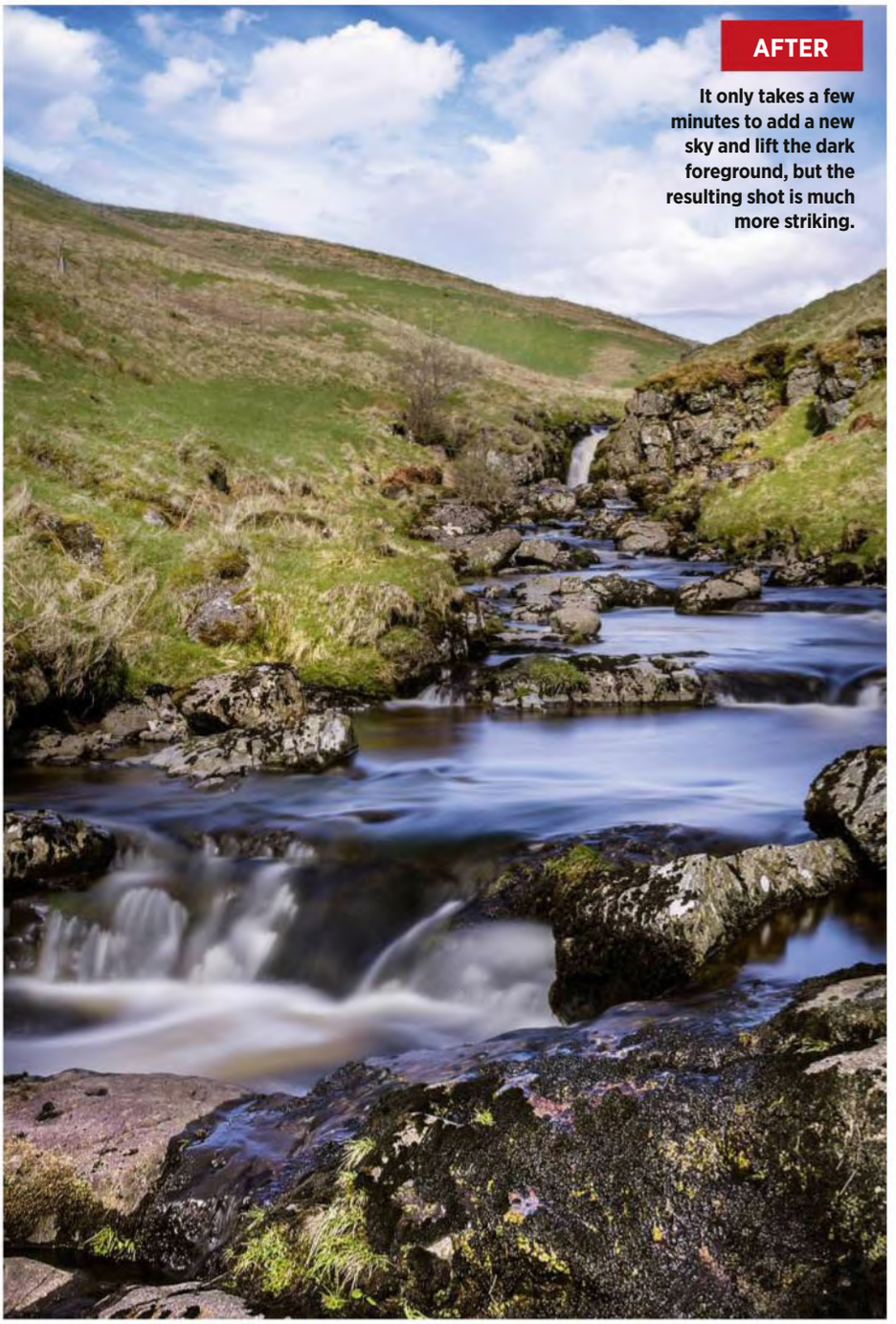
Removing distractions that take the eye away from the core elements of the scene is always a good idea. With busy scenes, it's best to make a Selection of the area you want to repair. This stops you from removing essential structures such as the vertical lines in the bridge. Use the Polygonal Lasso tool to select the offending area, then select the Clone Stamp tool. Alt+click on a clean area to sample the pixels, then release Alt and paint over the problem. Only the area within the Selection will be affected.





A mono conversion raises this shot to the top of its game, bringing out the detail of the lights and traffic trail on the Ponte 25 de Abril bridge.





It only takes a few minutes to add a new sky and lift the dark foreground, but the resulting shot is much more striking.

THE CAMPSIES
by John Hutton

Camera Nikon D3200 & 17-50mm f/2.8 lens
Exposure 10secs @ f/11, ISO 100 **Software** Adobe Lightroom



I was trying to capture motion on the Kirk Burn, Glasgow. I traversed a steep embankment and set my tripod up on some precarious rocks – I didn't mind my clothes getting splashed by the water but I was careful to keep my Nikon D3200 out of the drink!

DAN SAYS "Landscapes have to be one of the most challenging subjects photography has to offer. They often require long periods waiting for the right light and lengthy mountain treks to get to a location. John's dedication has paid off here, and he has created a wonderful, blurry effect on the flowing water, while still holding the static parts of the scene pin sharp. He has achieved this by using a slow shutter speed of 10secs and making sure the camera doesn't move by placing it on a firmly planted tripod.

"I like the way John has used the Rule of Thirds to balance the two waterfalls on intersecting third lines. It's a technical approach which pays off in composition terms, but the dappled lighting has left the foreground rock very dark and underexposed. This area up close to the lens is the 'anchor' for the whole shot, and though it's rich in texture, it's not pronounced enough to attract the viewer's eye and carry them into the rest of the scene.

"To release the detail lurking in the dark, the foreground needs to have a boost in brightness and contrast. You can do this by making a Selection of the area with the Lasso tool, feathering it in Refine Edge and then adjusting the sliders in Levels to brighten it. To further accentuate the texture, Photoshop's **Dodge tool** is the ideal weapon. To set it up go to the Tool Options bar, and set **Range** to **Highlights** and **Exposure** to a low value of 5%. Now play it over the foreground to see the detail come through.

"The other change I'd be tempted to make is the sky. It's a nice, bright blue on John's original, but a few more clouds would add extra interest and impact. Luckily, adding a brand new one is an easy task in Photoshop (see panel on the right).

"These minimal tweaks take a few minutes and transform the pic into a real winner!"

Expert advice Add a new sky in Photoshop

Open up a shot of your new sky and hit Ctrl+A to select it, Ctrl+C to copy it and Ctrl+W to close it down. Now open the shot you want the sky to go into and hit Ctrl+V to paste the other on top. In the Layers palette cycle through the Blending Modes until the sky looks good – Screen, Lighten or Hard Light usually work best. Hit Ctrl+T to put the sky into Free Transform mode. You can resize it with the corner handles, and can drag to alter its position. All that's left is to stop the clouds appearing on your land. Use the Eraser tool to paint over any offending areas.

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JON ADAMS For shooting and Photoshop queries, Jon is on hand to help solve any problems you have.



DAN MOLD With a background in photographic retail, Tech Ed Dan can advise on all aspects of camera kit.



MATTY GRAHAM Assistant Editor Matty is never seen without his DSLR, and is brimming with shooting tips.



ANDY HEATHER Andy worked as a commercial photographer in Japan, and is overflowing with advice.

Our top 10 Blending Modes

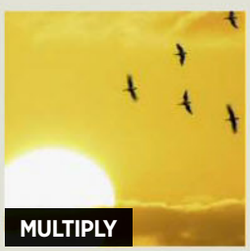
THE BEST DARKEN GROUP BLENDING MODES



Example images for the Darken group



The **Darken** Blending Mode looks at the colour information in your base and blend Layers, with the result being whichever is darker. Pixels lighter than the blend colour are replaced, and pixels darker than the blend colour do not change.



The algorithm for the **Multiply** mode 'thickens' the base colour using the blend colour so the result is always darker. Multiplying a colour with black produces a black result, but multiplying a colour with white leaves the colour in its original state.

THE BEST LIGHTEN GROUP BLENDING MODES



Example pics for Lighten

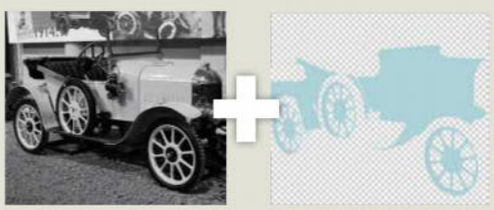


Lighten looks at the colour information of your base and blend Layers, and then outputs whichever is lighter in tone. Pixels darker than the blend colour are replaced, and pixels lighter than the blend colour do not change. This makes the Lighten and Screen Blending Modes ideal for inserting your images into arty, hand-painted white borders.

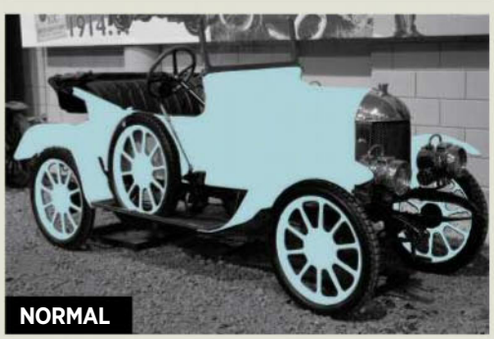


Screen looks at the colour information in your base and blend Layers and then multiplies the opposite of their colours. The result is always lighter. If you Screen onto black the colour will be unchanged, but Screen onto white and you'll end up with white. Like Lighten, it's useful for arty borders, but the effect produced is subtly different.

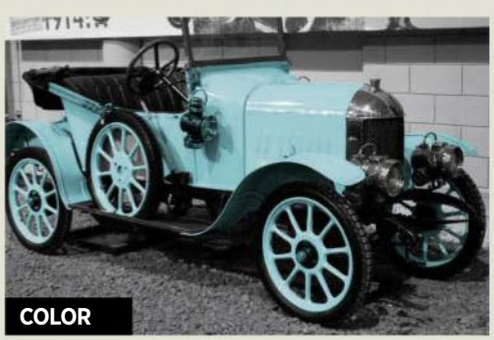
THE BEST OF THE REST



Example images used



A Layer will be set to **Normal** by default. No algorithm is applied, so there is no blend. You can still however mix Layers together by adjusting **Opacity** to make the affected Layer more transparent.



The **Color** mode blends the Hue and Saturation of your active Layer with the luminance of the Layer below. This mode is useful for hand-tinting mono images as you can paint colours on a new Layer and keep the detail and texture of the Layer beneath.

PHOTOSHOP

What are Layer Blending Modes?

Q I'm trying to get to grips with Blending Modes in Elements. Some Modes don't appear to have any effect, while others result in an unsightly mess. Could you explain what they do?
Terrance Williams

DAN SAYS When you copy and paste one image onto another, you place it on a new Layer. You can then make the pixels of this new Layer interact with the one beneath by changing its Blending Mode. This is achieved in the Layers palette by clicking the box that says Normal and selecting the Blending Mode required from the drop-down list. Photoshop and Elements share 25 Blending Modes (though Photoshop has an extra two), and each one has its own way of blending pixels. Using Blending Modes is non-destructive as you can go back and change the Mode you've picked at any point.

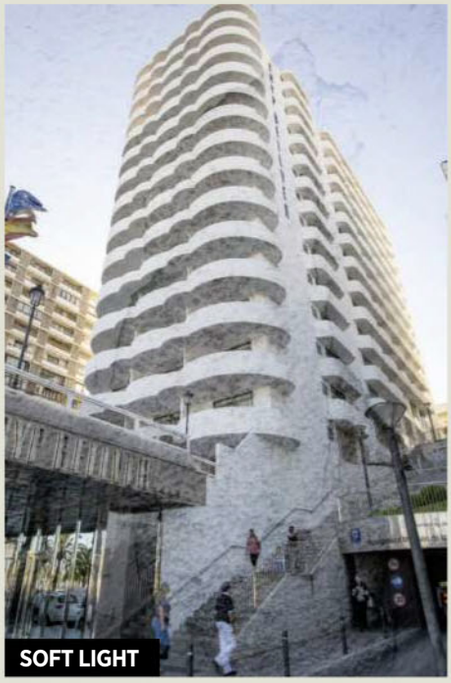
Blending Modes are separated into different groups. The Darken group has modes such as Darken, Multiply and Color Burn. These use different algorithms to make the underlying Layer darker using the pixels in the active Layer. But these Modes won't have any effect when the underlying Layer is already darker than the Layer you're attempting to blend.

There's always some experimentation involved, and you will often need to adjust the Layer **Opacity** to fine-tune the blend. Some of the Modes are more use than others, so below, we've outlined the 10 most useful Blending Modes. These are the ones most photographers will use time and again.

THE BEST CONTRAST GROUP BLENDING MODES



Example images used with the Contrast group



SOFT LIGHT

With **Soft Light**, If the blend colour is lighter than 50% grey, it becomes lightened as if it were dodged. If it's darker than 50% grey, it becomes darkened as though it were burned. The result looks like a soft diffused light has been applied to it.



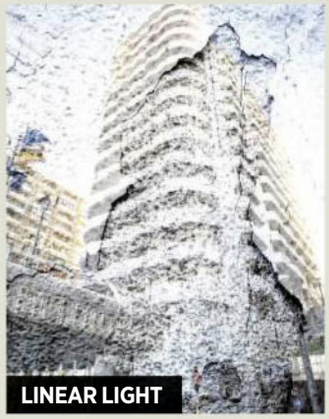
HARD LIGHT

If the blend colour is lighter than 50% grey, the image is lightened with **Hard Light**, as if it were screened. This can be useful for adding highlights. If it's darker than 50% grey, the image is darkened, as if it were multiplied. The blended result looks like it's been lit by a hard-edged spotlight.



OVERLAY

The **Overlay** Blending Mode multiplies or screens the colours, depending on the base colour. Patterns or colours overlay the existing pixels while preserving the highlights and shadows of the base Layer.



LINEAR LIGHT

Linear Light burns or dodges the colours by decreasing or increasing brightness. If the blend colour is lighter than 50% grey, the image is lightened, but if it's darker than this, the image is darkened.

Blending Mode shortcuts

Hold down Alt+Shift then press one of the following letters to set your active Layer to the desired Blending Mode.

N	Normal
I	Dissolve
K	Darken
M	Multiply
B	Color Burn
A	Linear Burn
G	Lighten
S	Screen
D	Color Dodge
W	Linear Dodge (Add)
O	Overlay
F	Soft Light
H	Hard Light
V	Vivid Light
J	Linear Light
Z	Pin Light
L	Hard Mix
E	Difference
X	Exclusion
U	Hue
T	Saturation
C	Color
Y	Luminosity

KNOW-HOW

What's the difference between RAW and JPEG?

Q I like to edit my JPEGs in Photoshop's Adobe Camera Raw interface. But, if I apply identical edits to a JPEG and a RAW file will I be able to see a difference?
Ross Townsend

JON SAYS The advantage of RAW files is that the fundamental building blocks of a picture such as contrast and colour are 'floating'. With JPEGs they're locked down in an 8-bit file with 256 separate tones in each of the three colour channels (red, green and blue). With a RAW file, you have a 12, 14 or 16-bit image (depending on your camera) so there are many more tones in the image. 12-bit gives you 4096 separate tones per channel, 14-bit gives 16,384, and 16-bit provides 65,536. These are all slightly different shades of grey, and the higher the number – the more data you have to play with.

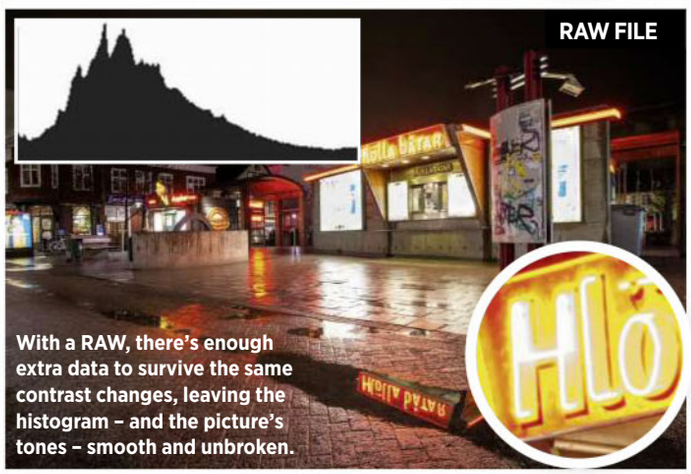
There's nothing wrong with using Camera Raw to improve your JPEGs, but they're already restricted to those 256 levels of grey in terms of tones and detail. When you adjust a RAW file, you make use of all the extra data it possesses, so you end up with a smoother picture.

When you make contrast adjustments to a JPEG, you'll see a spiked or comb-like Histogram in the resulting image. The gaps in the 'comb' show where tones are missing from the pic. Make the same tonal changes to a RAW file, and you'll see a smooth, continuous distribution of tones with no gaps. This is due to the extra data in the RAW.

Whether your eye can tell the difference between a RAW and a JPEG depends on the content and how extreme the adjustments are.

But there always will be a difference technically, so by using RAW, you have the freedom to make more dramatic changes and the opportunity to produce a far higher-quality result than with a standard JPEG.





KNOW-HOW

What's up with my long exposures?

Q I've been trying to shoot some star trails by taking consecutive long exposures. I have a Fujifilm XE2 CSC, but came unstuck when I tried to shoot 30secs exposures repeatedly. There was a long delay between shots, and I couldn't get my remote release to fire one shot straight after another. Am I doing something wrong?
Fiona Barnie

DAN SAYS The delay is caused by in-camera Long Exposure Noise Reduction (NR). When this feature is enabled, a camera takes a second, dark frame at the same settings you've used for the initial shot. It reduces any Noise evident in the picture by comparing the results from the dark frame with the original shot. Any artifacts generated by the camera's sensor are identified as 'foreign bodies' and are then processed out of the original image. If you switch off the **Long Exposure NR** in the Shooting Menu, the pictures will write far more quickly and allow you to shoot consecutive shots with no significant delay. If you cover the lens with a black card and shoot a 30secs exposure in Manual mode with and without the Long Exposure NR enabled, you'll note a big difference.



PHOTOSHOP

Can you help me repair shots?

Q **I'm a huge fan of macro photography and love to shoot insects. On one of my shots, I want to select a small piece of a butterfly's wing, copy it and move it over a damaged part of the wing so that it looks pristine. I'm sure this is a simple task in Photoshop but I can't figure out how to do it. Could your experts offer any advice?**
Tony Moore

ANDY SAYS When shooting at the large magnification involved in macro pictures, any imperfections become much more apparent. In Photoshop there are several ways to 'borrow' pixels from one area, and transplant them onto another to either clean up an image or repair a damaged subject. We've outlined the best way below, and it works in both Photoshop and Elements.



Patching up blemishes in Photoshop is a great way to make macro shots look their best.

iSTOCK



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PATCH UP DAMAGED INSECT WINGS IN 3 SIMPLE STEPS



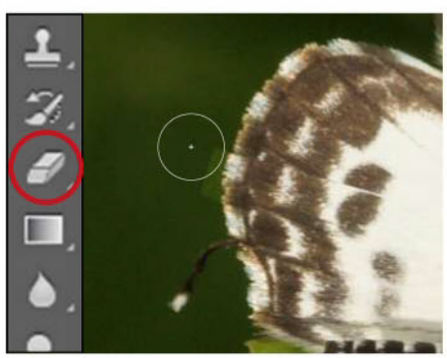
1 Make a Selection of an undamaged area

Click on the **Polygonal Lasso tool** in the Toolbox. It may be behind the **Lasso tool** so mouse down on it in Photoshop to bring up a fly-out menu. In Elements you'll find the different Lassos in the Tool Options bar. Click around an undamaged area that matches the part you want to repair. When you're back to your starting point the Selection will be made.



2 Cover the damaged area with your patch

Press **Ctrl+J** to copy the Selection to a new Layer. Hit **Ctrl+T** to put your 'patch' into **Free Transform** mode. Drag it into position so it covers the blemish and rotate it by holding your cursor outside the bounding box and dragging. Pull the corner handles to increase or reduce the size to match, then hit **Return** to set down in place.



3 Tidy up the patch with the Eraser tool

Zoom in tightly with **Ctrl+Plus**, then hold the **Spacebar** to momentarily bring up the **Hand tool**. This will let you drag the wing into view. Click on the **Eraser tool**, make sure you have a soft brush selected, and change brush size with the square brackets keys. Now paint over the hard edges to blend them in until you have a seamless join.

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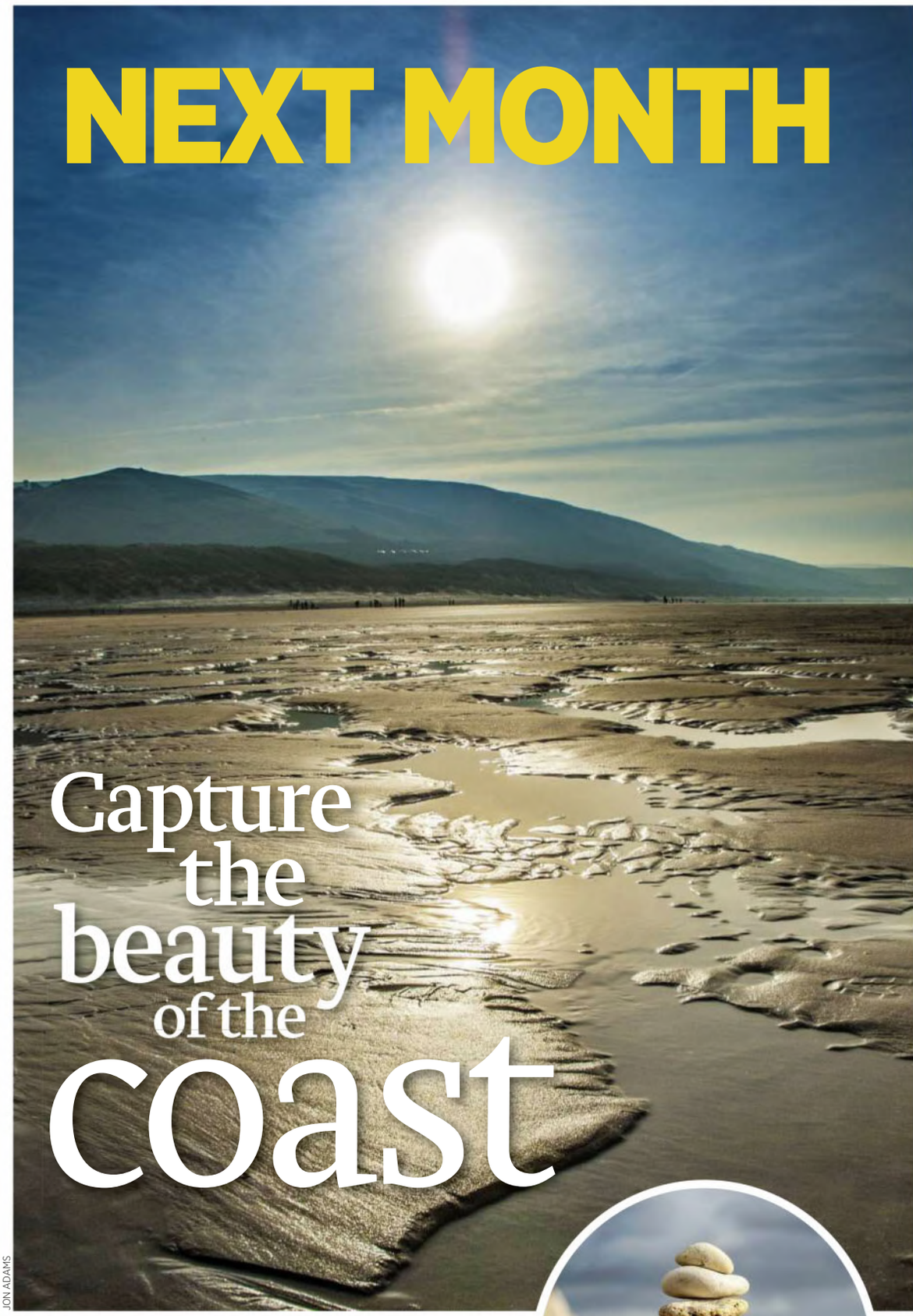
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CANON ANNOUNCE G3 X

25x zoom on bridge camera p115



HIGHEST RESOLUTION CSC TO DATE

Sony features 42Mp chip p114



Why you can trust our reviews & verdicts

Technical editor Dan Mold oversees rigorous tests in the field and the studio, and after years advising on gear and technique in photographic retail has an unrivalled eye for what photographers want. All reviews are thorough, unbiased and objective.

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COMPACT SYSTEM CAMERAS

Sony 42Mp is highest resolution CSC yet



SONY HAS REJUVENATED ITS flagship A7R Compact System Camera (CSC) with the A7R Mk II. Its upgrades are enormous, quite literally. Its 42.4Mp full-frame sensor is the most highly detailed of any mirrorless camera. Its resolution is almost on par with Canon's gargantuan 50.2Mp 5DS and 5DS R DSLRs which were released earlier this year.

New razor-sharp sensor aside, the A7R MkII has an impressive set of upgrades. Speed is an area that has seen much refinement. There are 399 phase-detection AF points which cover 45% of the image area, and this is said to make the Fast Hybrid AF performance 40% faster. Although its files contain 6Mp more data than the Mk I, a new Bionz X processor allows the new model to shoot 25% faster with a maximum burst rate of 5fps.

In addition to Full HD movies, the Mk II can shoot in 4K with a resolution of 3840x2160. 4K can be recorded using the whole of the sensor, but you can also shoot in the camera's Super35mm mode which crops the image.

The body is made from a rugged magnesium alloy and the mount has been toughened up to support large, heavy optics. In addition to the refined Electronic Viewfinder (EVF), the A7R features a tiltable LCD on the rear. The screen sees a resolution increase of 33%. Now sitting at 1,228.8k-dots, it should be sharp enough to shave with!



The full-frame chip is stabilised on five axes and this system promises sharp shots at slower shutter speeds as well as smoother video recordings. The ISO ranges from 100-25,600 but can be expanded to a huge 102,400 for low-light shooting. The A7R MkII will cost £2599, but the release date is still to come.

▶ *www.sony.co.uk*

SOFTWARE

Adobe announces major Photoshop and Lightroom CC upgrade

Adobe's Creative Cloud customers are now able to download the major 2015 update to the brand's apps, including the Lightroom and Photoshop image-editing software. Once the download is complete, users can access a host of new features as well as enjoying an increase in general performance.

New for Photoshop CC 2015 is the addition of Content-Aware Fill for Panoramas, which allows the software to fill in those gaps in the corners of the frame that are always created when stitching a pano. Also new are enhanced blur options that offer more control, such as being able to add monochromatic or colour Noise to an image for a more realistic result. Photoshop's Layer Styles options have also been enhanced, allowing you to add multiple Drop Shadows, Strokes or Colour/Gradient Overlays to your Layers.

Lightroom CC users haven't been neglected, with the addition of a Dehaze option in the Adjustments panel, which also features in Adobe Camera Raw. The slider adds or removes fog and haze from your images and can be used to clean up frames or to add mood and atmosphere. Mono devotees will be pleased to hear that there are now Black & White sliders available in local adjustment options like Graduated Filters, Adjustment Brushes and Radial Filters to fine-tune your desaturated masterpieces. There is no charge for the update and newcomers can still trial the full software free for 30 days.



Adobe's Creative Cloud has a host of new features available to customers who download its latest update.

In addition to the app updates, Adobe has launched an image stock library. Members can buy images for use in projects, choosing from 40 million photos, or upload their own content to sell with Adobe offering 33% of the sale price.

▶ *www.adobe.com*

BRIDGE CAMERAS

CANON UNVEILS SUPERZOOM G3 X



The G3X offers a top focal length of 600mm!

CANON HAS PULLED THE COVERS OFF its latest Powershot, the G3 X, which packs a whopping range of 24-600mm – that's a 25x zoom! The five-axis image-stabilised f/2.8-5.6 lens isn't the only standout feature, as the premium compact also offers a back-illuminated 20.2Mp 1in CMOS sensor, Wi-Fi/NFC technology and an ISO range spanning from 125 to 12,800.

Powered by the DIGIC 6 processor which is also found in Canon's top-line DSLRs like the 1D X and 5DS, the G3 X can fire off 5.9 frames per second. Images can be reviewed on the large 3.2in touchscreen that can be tilted and flipped all the way up to help compose self-portraits.

The G3 X is dust and splash-proof, allowing the camera to be used in rain showers, there's a built-in flash to help in low-light conditions, and there are also impressive movie functions. Full HD video can be captured in variable frame rates ranging from 24 to 60p, there's Manual control of aperture, ISO and shutter speed and the camera features dedicated microphone and headphone ports. Available now, the G3 X is priced at £799.99

▶ *www.canon.co.uk*



PRESGTIGE COMPACTS

Big spec in small Ricoh

Ricoh has announced the GR II – a small, prestige compact with a large, APS-C sensor. It's the successor to the GR model launched in 2013, and brings up-to-date features like Wi-Fi and NFC to a spec promising portability alongside DSLR quality.

The integrated lens offers a fixed, 18.3mm focal length (28mm in film terms), and the aperture range stretches from f/2.8 to f/16. There's a built-in ND filter for extending shutter times or shooting with large apertures in bright conditions.

The 16.2Mp sensor outputs DNG RAW or JPEG files that measure 4928×3264px, and the GR Engine V processor works with the sensor to give an ISO range from 100 to 25,600. There's no anti-aliasing filter to soften pics, so results are kept as sharp as possible.

With shutter speeds ranging from 1/4000secs to 300secs and a 4fps frame rate for up to 10 RAW files, it's brimming with technology, but packs it all into a small shell measuring just 117x62.8x35.7mm. The Ricoh GR II is available now, priced at £599.99.

▶ *www.ricoh-imaging.co.uk*

BRIDGE CAMERAS

Revamped Stylus 1s

The Olympus Stylus 1 received the accolade of *Best Bridge Camera* in our 2014 *Gear of the Year* awards. Now, Olympus has reinvigorated its popular compact-bridge hybrid with the Stylus 1s.

Although cosmetically very similar, the 1s has a new textured finish which is said to enhance shooting comfort over long periods. There's also new remote shooting capabilities via the OI Share App on a smart device. Interval and Time Lapse Shooting are welcome additions and let you capture a sense of motion. Focusing is another area that sees improvement, with new Pinpoint focusing, in addition to Focus Peaking for easy manual focusing.

Many features are carried over from its predecessor, including the 12.8Mp sensor and I.Zuiko digital lens. This offers a huge 22.8x zoom and boasts a constant maximum aperture of f/2.8.

The Stylus 1s will go on sale at £429.99 but a release date is yet to be announced.

▶ *www.olympus.co.uk*



NEWSBYTES

Sigma go wide!

Sigma's 24-35mm is the world's first full-frame wide-angle zoom to feature a constant f/2 aperture. It follows in the footsteps of Sigma's APS-C 18-35mm optic which offered an f/1.8 aperture. As we go to press, a release date and price are still to be announced.

▶ *www.sigma-imaging-uk.com*



Fluid Vanguard

Vanguard has announced the VEO 235AP – a travel tripod with a smooth pan head. Priced at £149.99, it has a centre column rotation system that collapses down quickly for portability, and there's a ring on the pan handle which can be turned to sit alongside the tripod's legs.



▶ *www.vanguardworld.co.uk*

Manfrotto Digital Director

Manfrotto has launched Digital Director, an iPad dock which transforms it into a monitor for Nikon/Canon DSLRs using the free Digital Director app. The Apple Certified product offers a dedicated processor (CPU) to sweeten the performance and connects to your camera via a USB cable. Once attached, parameters such as autofocus, exposure and white balance can be controlled. It's available now for iPad Air/2 for £399.95.

▶ *www.manfrotto.com*



TIPA

25 YEARS OF THE BEST PHOTO KIT

Independent awards help all photographers choose the best photo kit, so find out more about the global association that hands out the most coveted gongs...

WHEN YOU'RE LUSTING after a new piece of kit, you want to be assured that it will do the job you ask of it. Whether it's an accessory that'll make you more productive, a device that'll help you be more creative, or a whopping item that'll enrich your entire life, you don't want to make a mistake that'll cost you time or money.

One way to confirm your choice is by checking if the product has received any recognised and respected awards. These exist in every imaginable discipline, from cars and TVs to washing machines and waterproofs, but in areas that really matter (like photography!), they help us make the best investments.

You'll have seen the TIPA logo in adverts, camera shops, or even on a piece of kit you've bought. This logo is a sign that the gear in question has been officially recognised with a TIPA Award, but it's important to understand what's behind this Award, and what's behind TIPA itself.



Olympus' OM-D EM-5 scooped 2015's Best Expert CSC award.

What is TIPA?

The Technical Image Press Association is an independent, non-profit making body, and reaches it quarter century this year. Its membership consists of technically-focused photo magazines from around the world. Alongside promoting photography in general, TIPA's main function is to use the expertise of its members to recognise the best photo products on the market, so enthusiasts and pros can make informed decisions on what gear to buy. The recognition comes in the form of the TIPA Awards, which cover a broad range of categories across the photo-imaging market.

How did TIPA begin?

It all started in Paris in April 1991. After several discussions about the idea of an independent photo press association, editors representing 25 European photo magazines met for the foundation of TIPA. The founders knew they wanted to create a significant, wide-reaching body, so they invited all eligible, technical photo magazines from Europe to join. As a result, TIPA immediately became the largest family of independent photo & imaging magazines.

The birth of the 'CSC'

When photo brands create new concepts, there can be a multitude of ideas about the name under which the new products can be categorised. When compact cameras with interchangeable lenses were announced, TIPA considered many alternatives, but proposed the name Compact System Camera (or CSC) to define this type of camera. At the time, everything from MILC (Mirrorless Interchangeable Lens Camera) to EVIL (Electronic Viewfinder, Interchangeable Lens) was considered, but CSC was seen as the most enduring in the TIPA fraternity. This name has now been adopted by many brands, and has become part of today's parlance for photographers.





2015 saw the 25th TIPA Awards, where editors from the world's top photo mags gathered in Dubai to vote for the best kit. *Digital Photo's* Jon Adams is on the left.

TIPA past and present

We caught up with the old and new TIPA chairmen to get their views on the Association, its contribution to the photo industry and the changes that have occurred over the years.



Juan Varela
Chairman 1991-2008
"TIPA was a success initially because its Awards were totally independent. Slowly but surely, companies started to use the TIPA Awards logo for advertising and promotions. From its side, TIPA did more and more to support photography, with reader surveys, manufacturer and cultural visits, in-depth product tests and reader photography contests.

"As time went on, new companies from electronics and software markets came to play a bigger role in imaging. TIPA embraced these changes, always reflecting what's most important to the consumer."



Thomas Gerwers
Chairman 2008-present
"The TIPA Awards give orientation to consumers. They indicate the excellence of a product in its field. Each year there are hundreds of new products, but only 40 are recognised as the best.

"After 25 years, the TIPA logo has a worldwide reputation, based on the integrity of TIPA's decisions. This is the true foundation of its success.

"Today, people shoot more than ever. This trend will go on, so photography has a bright future."

Later that year, TIPA members elected the Board, and the first TIPA Awards ceremony was held.

When European governments decided that the 'Old Continent' was going to be transformed into the largest economic area in the western world, TIPA welcomed new members from eastern Europe. This brought together editors from many different countries, promoting a better understanding of the needs of photographers from diverse cultures. With the world getting smaller, TIPA decided in 2009 to expand and strengthen its influence at a global level, and opened its doors to non-European members. Now in 2015, with its reach spanning five continents, the power of TIPA's independent, unbiased awards is more effective than ever.

With its reach spanning five continents, TIPA Awards are more effective than ever

Changes over the years

TIPA's message of enthusiasm and optimism about photography hasn't changed over the past 25 years, but the industry has. In fact, photography is a world in constant change!

In 1991, there were only five awards, and the winning brands were Sanyo, Kodak, Fujifilm, Kyocera-Contax and Agfa. Of these, only Fujifilm remains a leading player in photography. In 1992, an award went to Konica-Minolta, another major company that went missing in the digital age. Few industries have been so disrupted in 25 years, but the TIPA Awards show us three important trends.

Firstly, photography has become a complex universe where the image exists in many different forms. With film, 10 or 20 categories could cover the entire market, but with digital, photography comes with so many tools that there are now 40 Awards.

Secondly, although some brands didn't survive, the big, historical camera names have retained their leadership, with Canon and Nikon still dominating the SLR market. In 25 years, Canon has collected no less than 69 Awards, and Nikon, 44. Other 'traditional' brands like Leica, Fujifilm, Pentax, Olympus, Samsung, Sigma and Tamron are still key innovators at the forefront of imaging.

Lastly, photography has been revitalised by the arrival of prestigious consumer electronics brands. Sony received its first TIPA Award in 1994 for a camcorder, and then waited until 2003 to win with the Sony DSC-V1. Panasonic gained its first TIPA award in 1992 – again for a camcorder – before receiving an award for the Lumix FZ20 in 2005.

Photography will continue to change in the coming years, but TIPA will be there to reflect and reward the best innovations for the benefit of every photographer.



Canon's EOS 7D Mark II – the worthy winner of 2015's Best Expert DSLR category.

How TIPA Award winners are chosen

TIPA attaches great importance to the choice of its 40 Awards each year. The process is conducted in several stages. In early January each year, Johan Elzenga, head of TIPA's Technical Committee, compiles a preliminary list of suggested categories. This list evolves as new products are introduced, and testing continues until late February when the Technical Committee meets with the Board. Here, not only is the choice of the best contenders discussed, but also whether the categories truly reflect the needs of both enthusiast and professional photographers.

Following this meeting, a shortlist is developed. This secret list is then circulated to all the magazines that are members of TIPA. Each member then adds their suggestions and comments. The shortlist evolves until April as new products are released and in-depth tests performed. The day before TIPA's General Assembly, which takes place in early April, the list of products is finalised.

The final vote is held with all the TIPA members present to determine the winners of the 40 TIPA Awards. It is the vote of all TIPA members that is decisive. The winning companies are informed of their Awards just a few days later. Each TIPA magazine then publishes the results to let their readers know which products have been selected as the best in their respective categories.

A TIPA Award is a seal of approval from a global association of photo magazines.



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NEW 5DS From £2999
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NEW 760D £649
760D Body £649
750D Body £599
750D + 18-55mm £689
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700D Body £414
700D + 18-55mm IS STM
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700D + 18-135 + 40mm
£749 Including £50 Cashback*
price you pay today £799

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Canon Cashback* offer ends 19.8.15

EOS 6D
20.2 megapixels | 4.5 fps | Full Frame Sensor
6D From £1139
6D Body £1139
6D + 24-70mm £1849

EOS 70D
20.1 megapixels | 7.0 fps
70D From £734
70D Body £734
70D + 18-55mm IS STM £767
70D + 18-135mm IS STM £951

EOS 1D X
18.1 megapixels | 12.0 fps | Full Frame Sensor
1D X £4499
1D X Body £4499

G7 X
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G7 X £394
G7 X Compact £394

Canon 7D Mk II Cashback* offer ends 31.7.15. Canon 5DS & 5D Mk III Cashback* offer ends 31.1.16
Canon 760D Cashback* offer ends 31.7.15.

Canon Lenses

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EF 85mm f1.8 USM	£251
EF 100mm f2.8 L IS USM Macro	£635
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EF-S 10-22mm f3.5-4.5 USM	£360
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EF-S 18-135mm f3.5-5.6 IS STM	£288
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EF 24-105mm f3.5-5.6 IS STM	£375
EF-S 55-250mm f4-5.6 IS STM	£200
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EF 70-200mm f4.0 L IS USM	£805
EF 70-300mm f4-5.6 IS USM	£318
Inc. £50 Cashback*	price you pay today £368
EF 100-400mm f4.5-5.6 L IS II USM	£1999

Canon Cashback* offer ends 19.8.15

Nikon

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price you pay today £334
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price you pay today £359

D5300 Black or Red
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D5500 Body £586
D5500 + 18-55mm VR II
£566 Including £60 Cashback*
price you pay today £626
D5500 + 18-140mm VR
£809 Including £60 Cashback*
price you pay today £869

D7100
24.1 megapixels | 6.0 fps
D7100 From £749
D7100 Body £749
D7100 +18-105mm VR £899

D7200 NEW
24.2 megapixels | 6.0 fps | 1080p movie mode
NEW D7200 £849
D7200 Body £849
D7200 + 18-105mm £1049

D610
24.3 megapixels | 6.0 fps | 1080p movie mode
D610 From £1184
D610 Body £1184
D610 + 24-85mm £1599

D750
24.3 megapixels | 6.5 fps | Full Frame Sensor
D750 £1749
D750 Body £1749
D750 + 24-85mm VR £2199
D750 + 24-130mm VR £2299

D810
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D810 £2399
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D4s £4449
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Df
16.2 megapixels | 5.5 fps | Full Frame Sensor
Df From £1999
Df Body £1999
Df + 50mm £2099

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10-24mm f3.5-4.5 G AF-S DX	£639
18-200mm f3.5-5.6 G ED AF-S DX VR II	£569
18-300mm f3.5-5.6 AF-S ED VR	£669
24-70mm f2.8 G AF-S ED	£1229
70-200mm f2.8 G AF-S ED VR II	£1579
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55-300mm f4.5-5.6 G AF-S DX VR	£244
Inc. £25 Cashback*	price you pay today £269
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Inc. £20 Cashback*	price you pay today £279
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Inc. £15 Cashback*	price you pay today £195

Nikon Cashback* offer ends 26.8.15

Photo Bags & Rucksacks

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tamrac

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Apache 6 £99

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Hadley: *Canvas/Leather: Khaki/Tan, Black/Tan, Black/Black. FibreNyte/Leather: Khaki/Tan, Sage/ Tan, Black/Black.*

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RuggedWear:
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F-5XZ £99.95
F-6 £99
F-803 £139
F-2 £149

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• 9cm Min Height

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MT190CXPRO4 Carbon Fibre £239
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Manfrotto Imagine More

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MACRO LENS GROUP TEST

CLOSE CONTENDERS

A dedicated macro lens provides the ultimate image quality, performance and ease of use for close-ups. We find out which budget APS-C model is best

TEST BY DAN MOLD

IF YOU'VE BEEN INSPIRED by our big feature on p26, then your creative macro juices will be well and truly flowing. While the low-cost routes covered are a great way of gauging whether macro photography is an avenue you want to pursue, a dedicated macro lens is the answer if you want the best image quality and the most practical solution.

We've lined up three of the best sub-£350 macro lenses designed specifically for APS-C format DSLRs. Regular optics such as the 'kit' lens that came bundled with your body can only focus so close, but macro lenses let you get much closer to your subject.

All the lenses in this test have a maximum reproduction ratio of 1:1. This is referred to as life-size, and is so-called because it means your subject will be captured at the same size as if it were laid across your camera's sensor.

If you're staying with your APS-C camera for the foreseeable future, the lenses on test are perfectly suited to its smaller body. What's more, their apertures of f/2.8 or wider make them great for portraits too, so they're more than a one-trick pony.

But which of these affordable and versatile optics should you buy? Let's find out...

How we did the test

We examined the macro optics using identical tests, exploring key factors to uncover a winner.

We looked at ease of use and autofocus speed to rate the performance, the ergonomics and features were assessed to rate the build, and our lens test charts revealed any defects in the glass. Our findings were then weighed up against the street price to unearth the winning optic.



WHAT TO LOOK FOR

INTERNAL FOCUSING

An Internal Focusing mechanism means the lens stays the same length when you're focusing, so you're less likely to scare off a potential subject.

FOCUSING RING

Focusing is critical with macro so look for a focusing ring that offers plenty of grip and has a smooth, positive action.



MAXIMUM APERTURE

The aperture is a diaphragm inside the lens that opens to control the light. How 'wide' it opens is called the maximum aperture. The wider it opens, the faster you can shoot.

FOCUS LIMITER

This lets you restrict the focus range for faster focusing. It's useful when you know how far away your subject is.

CANON 60MM F/2.8 USM £333

CANON'S 60MM F/2.8 IS THE MOST AFFORDABLE macro lens the firm makes and has been the main staple for APS-C Canon DSLR users for a decade. As an APS-C lens it's available exclusively to fit Canon EF-S mounts, and pairs perfectly with DLSRs like the 1200D, and 750D, producing a film-equivalent focal length of 96mm when attached.

The lens has a maximum aperture of f/2.8 and is constructed from 12 elements in eight groups. It also boasts a Super Spectra coating, which is said to deliver sharp, high-contrast images with minimal ghosting or flare.

For a fast and quiet autofocus performance, Canon has integrated an Ultrasonic Motor (USM). The autofocus was swift and without a doubt the fastest at focusing on test, but there's a caveat to this. It tended to hunt a little more frequently, so required a second half-press of the shutter to have another try when this occurred. The AF was quiet, and although a slight hum could be heard it was by no means loud enough to scare off a potential subject. It also features internal focusing so maintains its dimensions of 73x69.8mm throughout the focus range. Unlike the Nikkor 40mm, a focus limiter has been left off the bill.

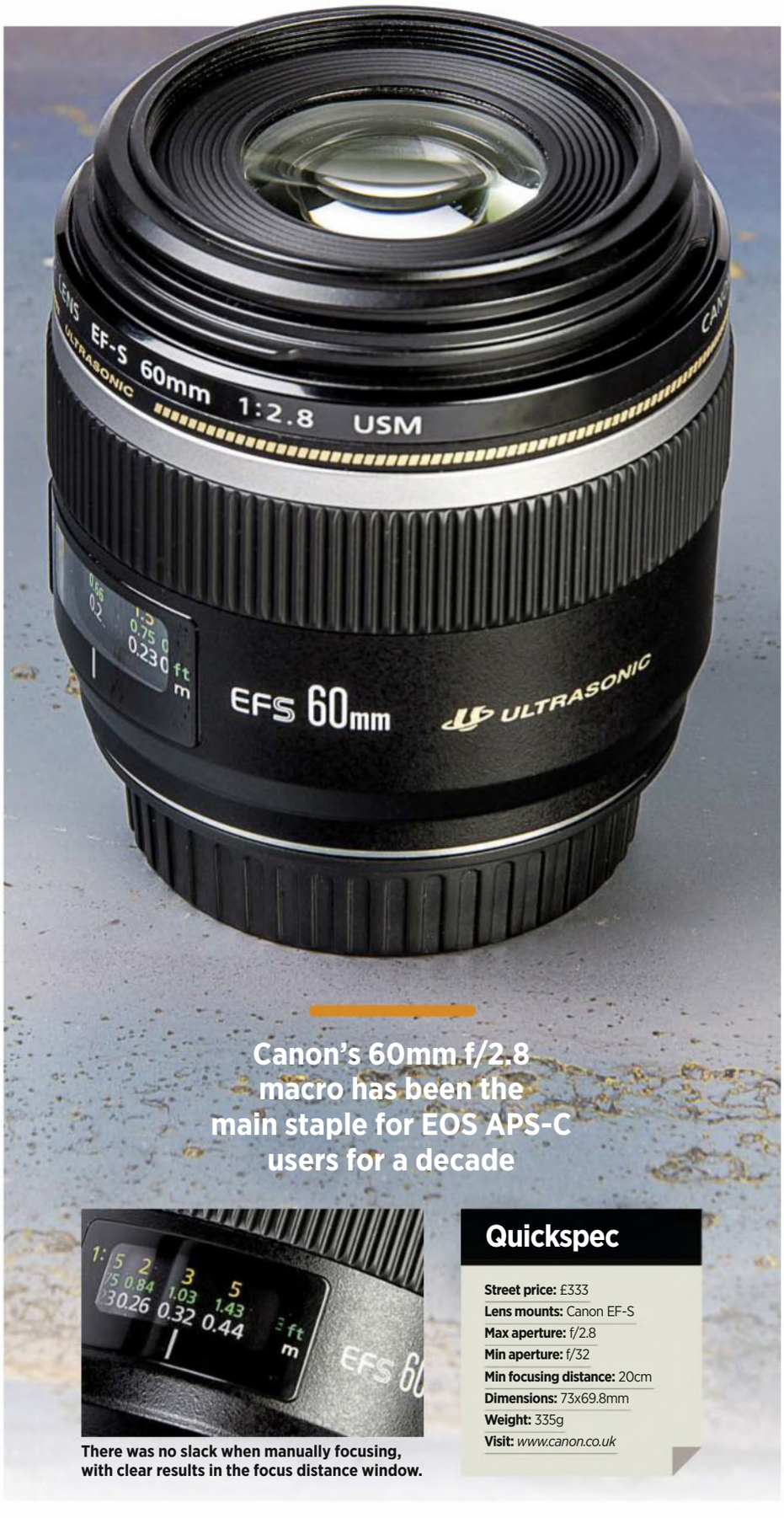
The AF/MF switch is a little on the small side and sits quite high on the side of the barrel, but its full-time Manual Focus is a good feature to have for overriding the AF. The focusing ring was the narrowest on test with a width of 1.5cm, but it rotated smoothly and had no lag between turning the ring and the focus engaging. There's also a focus distance window on top of the barrel so you can see exactly where your focus lies.

When it came to weight, the Canon was nearly on par with Tamron's 350g lens. With a weight of 335g though, they're both heavier than the 235g of Nikon's 40mm. The 60mm f/2.8 is the only lens on test not to come bundled with a lens hood, which is a costly £30.99 on top. This prevented the 60mm from scoring top marks for value.

DIGITAL PHOTO THE RATINGS

Pros: Produces sharp shots wide-open, super-fast AF
Cons: Focusing ring is quite narrow, lens hood comes at extra cost

Features and build	★★★★☆
Performance	★★★★★
Image Quality	★★★★☆
Value for money	★★★★☆
Overall verdict	★★★★☆



Canon's 60mm f/2.8 macro has been the main staple for EOS APS-C users for a decade

There was no slack when manually focusing, with clear results in the focus distance window.

Quickspec

Street price: £333
Lens mounts: Canon EF-S
Max aperture: f/2.8
Min aperture: f/32
Min focusing distance: 20cm
Dimensions: 73x69.8mm
Weight: 335g
Visit: *www.canon.co.uk*

NIKON NIKKOR 40MM F/2.8 £185

THE NIKKOR 40MM F/2.8 MICRO is one of the most affordable DSLR macro lenses on the market, so does it offer best value for APS-C Nikon users? Well, it shares the same maximum f/2.8 aperture as its Canon rival, houses nine elements in seven groups and features a Close-Range Correction (CRC) system for extra clarity when shooting macro. So far, so good.

But, one downside is its 40mm focal length. Take into account the 1.5x Nikon crop factor and you're left with a film-equivalent of 60mm. The other lenses on test have a film-equivalent of around 90mm. In short, this means you need to be physically much closer to your subject to achieve the full macro effect, and that's not always practical, especially with subjects that are easily spooked. It fits DSLRs with a Nikon F mount, and can be used on full-frame bodies with the crop mode engaged.

The autofocus performance of the Nikkor 40mm f/2.8 was good, but outshone by its two rivals. It was a touch slower than Tamron's 60mm f/2.8, and a little louder to focus too. On the flip side, its Focus Limiter is a feature its two rivals miss out on. The limiter can be set to either Full or 0.2m-Infinity, and was slightly quicker off its feet when flicked to the latter.

It's the only lens on test not to focus internally. It measures a squat 68.5x64.5mm when focused to infinity, but the front element racks out by a further 1.75cm at its maximum 1:1 setting, taking the overall length of the lens to 9cm.

The Nikkor 40mm f/2.8 is the lightest lens here at 235g and is similar in size to Nikon's 18-55mm II kit lens. The focus ring sits at the front so it's easy to find and adjust when looking through the viewfinder. It's 1.8cm wide, and 1.1cm of this is rubberised for extra purchase. It turns smoothly, though we noted a small amount of play between turning the ring and the focus moving.

Alongside the included lens hood is a soft pouch to keep dust at bay when not in use, which is a welcome addition.



The Nikkor 40mm f/2.8 is the most compact lens on test, comparable in size to an 18-55mm kit lens

The focus speed and accuracy is improved by flicking the Focus Limiter switch to ∞-0.2m.

Quickspec

Street price: £185
Lens mounts: Nikon F
Max aperture: f/2.8
Min aperture: f/22
Min focusing distance: 16.3cm
Dimensions: 68.5x64.5mm
Weight: 235g
Visit: *www.nikon.co.uk*

DIGITAL PHOTO THE RATINGS

Pros: Affordable price, only lens on test with a Focus Limit switch, most portable on test
Cons: Focal length means you have to get closer to your subject, slow AF

Features and build	★★★★☆
Performance	★★★☆☆
Image Quality	★★★☆☆
Value for money	★★★★☆
Overall verdict	★★★★☆

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- Amateur Photographer May 2014

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ND1000 Filters

★★★★ - Photoplus Magazine

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58mm	£25.50	82mm	£37.50

"Best Value" in Photoplus Big Stopper Group Test

Circular Polarisers

Sizes: 25 to 86mm

49mm	£16.75	67mm	£18.00
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55mm	£17.00	77mm	£21.00
58mm	£17.00	82mm	£26.00
62mm	£17.50	86mm	£33.50

ND Fader Filter

★★★★ - Amateur Photographer

46mm	£26.00	62mm	£32.00
49mm	£27.00	67mm	£35.00
52mm	£27.50	72mm	£36.00
55mm	£29.50	77mm	£39.00
58mm	£31.00		

4 stars from AP Magazine for Quality & Value

UV Filters

Sizes: 25 to 105mm

46mm	£10.95	62mm	£13.95
49mm	£12.95	67mm	£14.95
52mm	£12.95	72mm	£15.95
55mm	£12.95	77mm	£17.95
58mm	£13.95	82mm	£19.95

ND Filters

Sizes: 27 to 82mm

46mm	£17.00	62mm	£21.00
49mm	£17.00	67mm	£23.00
52mm	£18.00	72mm	£26.00
55mm	£19.00	77mm	£28.00
58mm	£20.00	82mm	£31.00

4 Grades: 0.3, 0.6, 0.9, 1.2

ND Grad Filters

Sizes: 40.5 to 82mm

46mm	£16.50	62mm	£20.00
49mm	£17.00	67mm	£21.00
52mm	£18.00	72mm	£21.50
55mm	£19.00	77mm	£22.50
58mm	£19.50	82mm	£24.50

4 Grades: 0.3, 0.6, 0.9, 1.2

★★★★★ Digital Camera ND Group Test

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More Circular Filters...

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Square Filters

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Aluminium Filter Holder

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P Size	£24.95
P Size W/A	£24.95



Pro Filter Kits

NEW!

3 types: Full ND, Soft ND, Hard ND

A Size Starter	£34.95
A Size Filter	£49.95
P Size Starter	£39.50
P Size Filter	£54.95



Square Filter Holders

A Size	£8.95
P Size	£5.00
P Size W/A	£5.00
Adaptor Rings	£4.95



Square Filter Kits

3 types: Full ND, Soft ND, Hard ND

A Size Starter	£24.95
A Size Filter	£39.95
P Size Starter	£24.95
P Size Filter	£39.95

Starter Kit: 1 Filter Filter Kit: 3 Filters



Individual Square Filters

A & P Size Resin Filters

★★★★★ - Digital Photo

0.3 Full ND	£13.50	0.9 Hard ND Grad	£13.50	0.3 ND Glass Pro	£29.95
0.6 Full ND	£13.50	1.2 Hard ND Grad	£15.95	0.6 ND Glass Pro	£29.95
0.9 Full ND	£13.50	Circular Polariser	£26.00	0.9 ND Glass Pro	£29.95
1.2 Full ND	£15.95	Blue Grad	£13.50	ND Glass Pro Set	£79.95
0.3 Soft ND Grad	£13.50	Sunset Grad	£13.50		
0.6 Soft ND Grad	£13.50	Twilight Grad	£13.50		
0.9 Soft ND Grad	£13.50	Black & White Filters	£13.50		
1.2 Soft ND Grad	£15.95	4x Star Effect	£13.50		
0.3 Hard ND Grad	£13.50	6x Star Effect	£13.50		
0.6 Hard ND Grad	£13.50				

5 stars for build, image quality & value for money. April 2014



Close up Lens Sets



Sets include: 1+ Lens, 2+ Lens, 4+ Lens, 10+ Lens

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★★★★★ Photoplus Best on Test 90% rating

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58mm	£19.00	77mm	£24.50
62mm	£20.00		

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Thread	Range	Thread	Range
37mm	27-72	55mm	46-77
37.5mm	37-52	58mm	46-77
38.1mm	40.5-58	62mm	52-77
39mm	49-52	67mm	58-82
40mm	49	72mm	86-105
40.5mm	37-58	77mm	58-105
43mm	37-72	82mm	72-105
43.5mm	46-58	86mm	72-105
46mm	37-62	93mm	82
48mm	46-58	95mm	82-105
49mm	37-77	105mm	86-95
52mm	46-77		

Lens Adaptors

Camera		Lens	£	Camera		Lens	£
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Canon EOS	to	Nikon	£22.95	Micro 4/3	to	Nikon G	£34.95
Canon EOS	to	Nikon G*	£39.95	Micro 4/3	to	M42	£29.95
Canon EOS	to	Pentax K	£24.95	Micro 4/3	to	Olympus OM	£29.95
Canon EOS	to	Olympus OM	£24.95	Micro 4/3	to	Minolta MD	£29.95
Canon EOS	to	Con/Yash	£24.95	Micro 4/3	to	Leica R	£29.95
Canon EOS	to	Leica R	£22.95	Micro 4/3	to	Leica M	£29.95
Canon EOS	to	Leica M	£24.95	Micro 4/3	to	Sony Alpha	£34.95
Canon EOS	to	Canon FD	£44.95	Micro 4/3	to	Pentax K	£29.95
Canon EOS-M	to	Canon EOS	£29.95	Micro 4/3	to	Canon FD	£29.95
Canon EOS-M	to	Leica M	£29.95	Micro 4/3	to	Con/Yash	£29.95
Canon EOS-M	to	Nikon	£29.95	4/3	to	M42	£17.95
Canon EOS-M	to	Canon FD	£29.95	4/3	to	Con/Yash	£22.95
Canon EOS-M	to	C Mount	£29.95	4/3	to	Leica R	£22.95
Canon EOS-M	to	M39	£29.95	4/3	to	Nikon	£22.95
Canon EOS-M	to	M42	£29.95	4/3	to	Olympus OM	£22.95
Fuji X	to	M42	£24.95	4/3	to	Pentax K	£22.95
Fuji X	to	Leica M	£29.95	Pentax	to	M42	£18.95
Fuji X	to	Nikon	£29.95	Pentax	to	Nikon	£44.95
Fuji X	to	Canon EOS	£29.95	Pentax	to	Sony Alpha	£44.95
Fuji X	to	Olympus OM	£29.95	Pentax	to	Canon FD	£44.95
Fuji X	to	4/3	£29.95	Sony Alpha	to	M42	£15.95
Fuji X	to	Canon FD	£29.95	Sony Alpha	to	Minolta MD	£44.95
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Nikon	to	M42	£24.95	Sony Alpha	to	Pentax K	£44.95
Nikon	to	Canon FD	£44.95	Sony Alpha	to	Canon FD	£44.95
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Nikon 1	to	M42	£24.95	Sony NEX	to	Nikon	£29.95
Nikon 1	to	M39	£22.95	Sony NEX	to	Sony Alpha	£34.95
Nikon 1	to	Nikon	£29.95	Sony NEX	to	Olympus OM	£29.95
Nikon 1	to	Canon EOS	£44.95	Sony NEX	to	Pentax K	£29.95
Nikon 1	to	Pentax K	£29.95	Sony NEX	to	Leica M	£29.95
Nikon 1	to	Leica M	£39.95	Sony NEX	to	Leica R	£29.95
Nikon 1	to	Leica R	£37.95	Sony NEX	to	Canon FD	£42.95
Nikon 1	to	Con/Yash	£23.95	Sony NEX	to	M39	£23.95
Micro 4/3	to	Canon EOS	£29.95	Sony NEX	to	M42	£23.95

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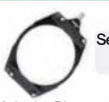
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TAMRON 60MM F/2 DI II £329

THE 60MM MACRO LENS FROM TAMRON boasts the widest aperture on test at f/2. It may seem strange for a macro lens to shoot so wide-open, as depth-of-field is already very shallow at these high magnifications. But, this actually makes it more versatile as it can blur backgrounds with ease when shooting regular pics like portraits. As a third-party optic the Tamron 60mm is available in different lens mounts. On a Nikon DX or Sony A APS-C DSLR you'll have a film-equivalent of 90mm, but this is a little more cropped on a Canon APS-C body at 96mm.

It's constructed from 10 elements in 14 groups and features special Extra Low Dispersion (XLD) and Low Dispersion (LD) elements. These are designed to reduce chromatic aberration and keep corners sharp even at its wide f/2 maximum aperture.

Tamron's autofocus motor impressed, hunting down subjects in a fast and very smooth manner. Although it was beaten for pace by Canon's blisteringly-fast AF performance, Tamron's 60mm tended to hunt less so it was a little more reliable. Manual focusing was a delight as its large 3cm-wide focusing ring sits at the front of the barrel making it easy to find when looking through the viewfinder. We noted a tiny amount of play between turning the ring and the focus distance window actually moving, but after this minor delay the ring turned very smoothly and it was easy to make fine adjustments.

The focusing is internal so the lens keeps its dimensions of 68.5x64.5mm from 1:1 all the way to infinity. Its dimensions make it the largest lens on test, but this wasn't necessarily a bad thing. Its chunky size added extra security, and the large, grippy focus ring gave us plenty of purchase when handholding. It's the heaviest lens on test too. Tipping the scales at 350g, it's 115g heavier than Nikon's 40mm. However, Tamron's larger full-frame 90mm weighs over half a kilo, so it's pleasantly lightweight by comparison.



Tamron's 60mm f/2 is the largest optic on test, but it's still very compact and felt secure in the hand

Boasting the widest aperture on test of f/2, Tamron's 60mm is great for portraits too.

Quickspec

Street price: £329
Lens mounts: Canon EF-S, Nikon F & Sony A **Max aperture:** f/2
Min aperture: f/22
Min focusing distance: 23cm
Dimensions: 73x80mm
Weight: 350g
Visit: *www.tamron.eu*

DIGITAL PHOTO THE RATINGS

Pros: Fast f/2 maximum aperture, large focusing ring, reliable focus
Cons: Largest lens on test, images are a little soft when shooting wide-open

Features and build	★★★★★
Performance	★★★★☆
Image Quality	★★★★☆
Value for money	★★★★★
Overall verdict	★★★★★

IMAGE QUALITY TEST RESULTS

We used lens test charts to reveal imaging defects such as chromatic aberration, softness, vignetting and optical distortion

How we conduct our image quality tests

We lit our lens test charts evenly with daylight-balanced lamps to inspect the image quality of each optic. The lenses were attached to Canon and Nikon APS-C DSLRs mounted on a tripod. We then fired through the entire aperture range of each. It's common for corner sharpness to dip at wider apertures, so if a lens can produce a sharp shot across the frame here it's very impressive.

We also inspected the shots for chromatic aberration, otherwise known as fringeing. This is where the lens elements fail to focus all colours at a single point, so fringes of colour can be seen either side of high-contrast edges. This is simple to fix in today's RAW editing software but worth noting nonetheless.

Middle and smaller apertures such as f/11 or f/16 will arguably see the most mileage on macro lenses. They need to be used because depth-of-field is much shallower at high magnifications, so we paid particular attention to these values. Let's see how they got on...



CANON 60MM F/2.8

At its widest aperture of f/2.8 the Canon 60mm produced some of the sharpest images across the frame. The corners were impressively sharp and we noted only a slight amount of purple and green chromatic aberration. Its focus became razor sharp at f/4 and chromatic aberration became virtually undetectable when closing the aperture down to f/8. The sharpness didn't fall off until f/16, and here, Tamron's 60mm f/2 lens was fractionally sharper across the frame.

Image Quality ✪✪✪✪✩





NIKON 40MM F/2.8

The Nikkor micro 40mm f/2.8 gave a sharp centre when shooting wide open, though its corners were notably soft in comparison. We also noted a small amount of purple and green fringeing. The corners sharpened up at f/4, though when stopped down to f/8 it didn't have as much contrast or clarity as its two rivals. Clarity dipped from an aperture of f/11 and it was beaten for sharpness across the frame by the other contenders at f/16.

Image Quality ✪✪✪✩✩

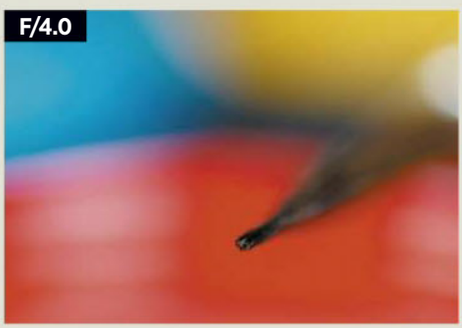




TAMRON 60MM F/2

Boasting the fastest aperture on test of f/2, Tamron's 60mm was – perhaps expectedly – a little soft when shooting at f/2. We compared its f/2.8 aperture to its competitors and saw slightly soft corners with some purple and green fringeing. The corners sharpened up dramatically by f/3.5, and at f/8 the Tamron optic gave a solid sharpness across the frame – though the fringeing persisted. At f/16, the sharpness dipped but was sharper across the frame than its rivals.

Image Quality ✪✪✪✪✩





MACRO LENS COMPARISON CHART







	CANON 60MM F/2.8	NIKON 40MM F/2.8	TAMRON 60MM F/2
STREET PRICE	£333	£185	£329
FULL-FRAME OR APS-C	APS-C	APS-C	APS-C
LENS MOUNTS	Canon EF-S	Nikon F	Canon EF-S, Nikon F and Sony A
35MM FILM-EQUIVALENT	96mm	60mm	96mm Canon, 90mm Nikon & Sony
LENS CONSTRUCTION	12 elements in 8 groups	9 elements in 7 groups	10 elements in 14 groups
MAXIMUM APERTURE	f/2.8	f/2.8	f/2
MINIMUM APERTURE	f/32	f/22	f/22
MINIMUM FOCUSING DISTANCE	20cm	16.3cm	23cm
FILTER THREAD SIZE	52mm	52mm	55mm
FOCUS LIMITER SWITCH	No	Yes	No
INTERNAL FOCUSING	Yes	No	Yes
LENS HOOD INCLUDED	No	Yes	Yes
DIMENSIONS	73x69.8mm	68.5x64.5mm	73x80mm
WEIGHT	335g	235g	350g
VISIT	www.canon.co.uk	www.nikon.co.uk	www.tamron.eu
FEATURES & BUILD	★★★★½	★★★★	★★★★★
PERFORMANCE	★★★★★	★★★	★★★★½
IMAGE QUALITY	★★★★½	★★★	★★★★½
VALUE FOR MONEY	★★★★½	★★★★	★★★★★
OVERALL VERDICT	★★★★½	★★★★	★★★★★

THE VERDICT

IT'S SURPRISING HOW MUCH macro lens you can get with a budget of £350. Nikon's Nikkor 40mm f/2.8 had the most tempting price on test at £185 and boasted some great macro features such as its Focus Limiter switch. It's light and portable, being similar in size to a kit lens, so it easily slips in your bag. But its low street price came as a bit of a compromise – the wider 40mm focal length reduces your working distance and that's not always practical with skittish macro subjects like insects.

Canon's 60mm came a close second this month, and is a sound APS-C macro lens to consider if you want to stay brand-loyal. Its focusing ring is a little narrow but it rotates smoothly with no slack. The autofocus was very speedy, so could potentially be the better option if you're predominantly shooting close-ups of fast-moving fauna. But its handling and ergonomics were beaten by our winner, and its value was hampered by the absence of a lens hood, which costs an additional £30.99 should you require it.

WINNER

TAMRON 60MM F/2 DI II

The deserved winner this month is Tamron's 60mm f/2. It may be the bulkiest optic of our trio, but it's pleasantly lightweight when compared to a full-frame equivalent. AF speed was beaten by the impressive USM in Canon's 60mm, but although the Tamron took a little longer to lock on to a subject, it was accurate. Its wide f/2 aperture impressed and made it ideal for portraits too. The large focusing ring made it easy to operate and its internal focusing means you're less likely to scare off a subject. On the flip side, the Tamron 60mm was beaten by its rivals for sharpness at wider apertures, but for macro use you're more likely to shoot at smaller apertures such as f/16 – and this is precisely where this Tamron model excels. If you own a Canon, Nikon or Sony DSLR, this is the lens to go for.



CANON 750D / ENTHUSIAST DSLR / £689 WITH 18-55MM LENS

A TOUCH OF CLASS

Canon's update to its beginner range sees a bigger sensor and smart-device integration

TEST BY BEN DAVIS

WAY BACK IN 2003, Canon launched the 300D. It was the first camera in this now well-established series, but more importantly it marked a milestone for another reason. It was the first DSLR to retail for under £1000, making digital photography more accessible to the enthusiast.

Now, ten generations later, we have the 750D, and it sits alongside four others in Canon's entry-level line-up. It has a launch price of £689 – demonstrating how prices have continued to tumble for consumers – and a spec sheet that would be baffling to those early-adopters. We put one to the test to see how far we've come...

Features & Build

Despite being an entry-level DSLR, the 750D has the second highest resolution sensor in the entire Canon line-up. The 22.3x14.9mm APS-C CMOS chip boasts an impressive 24.2Mp, with a resolution of 6000x 4000px. Interestingly, it bucks recent trends by retaining an Anti-Aliasing filter. This slightly softens images to protect against the effects of moiré patterns. In Canon's EOS range it's only trumped for detail by the remarkable 5Ds, which has a huge 50.2Mp chip, and costs five times more than the 750D.

The 750D's sensor has a 1.6x crop factor, meaning that the supplied 18-55mm f/3.5-5.6 lens has a film-equivalent focal length of 28.8-88mm. This makes it ideal for everyday use. The lens also features built-in Image Stabilisation, providing a four-stop safety net to guard against the blur of camera shake.

Paired with the sizeable sensor is the DIGIC 6 processor – an engine previously found in Canon's Powershot series, as well as the 7D MkII and aforementioned 5Ds. The partnership between chip and processor provides the 750D with an ISO range of 100-12,800, which can be expanded to 25,600. The power of the processor also means you can capture images at up to 5fps in the Continuous shooting mode, so you don't miss out on the action.

For focusing there are 19 AF points, and they're all the more advanced cross-type sensors which provide greater speed and accuracy for locking on to subjects. They can be set to work individually, as part of a group or assigned to Auto where the camera intelligently decides which area should be held sharpest. You won't always agree with its decision though, so it's best to take control yourself.

The optical viewfinder offers 95% frame coverage and includes a host of overlaid shooting information, beyond the usual exposure settings. This makes it easier to stay in control and adjust settings on the fly, without taking your eye off the scene.

If you need to compose from a more creative angle, then you have the option of using the 1040k-dot 3in vari-angle touchscreen, which offers 100% frame coverage. When using Live

The lens features built-in Image Stabilisation providing a four-stop safety net

TEST SHOT



100% DETAIL



Image quality Detail & lens

The 750D comes with a 18-55mm f/3.5-5.6 lens, and offers a good zoom range for most situations. The image quality definitely impressed, despite a few minor defects. At the wide end of the zoom we encountered some chromatic aberration (coloured fringeing) towards the edges of the frame throughout the aperture range. There was a minor amount of barrel distortion, but no significant vignetting. At the long end of the zoom we found the problems of fringeing were much less apparent, and there was no discernible lens distortion. Detail was sharp across the frame, at all settings.

The 750D features the highest resolution of any Canon DSLR with an APS-C sized sensor, and is the first to offer Wi-Fi.

Key features of the Canon 750D

Pop-up flash

The 750D comes with a built-in pop-up flash, allowing you to light up your portraits in the dark.



MODE DIAL

The rotating mode dial gives access to the usual M,A,S,P modes, as well as a number of Scene modes in which the camera takes more control.

VARI-ANGLE TOUCH SCREEN

The 3in 1040k-dot screen can be flipped out from the body and rotated on an articulated joint, and controls can be adjusted by tapping icons on the LCD screen.



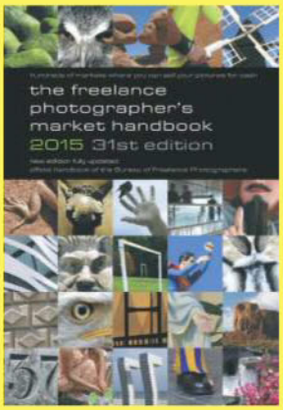
QUICK MENU BUTTON

One press of the Quick Menu button brings up an array of exposure and image settings, which can be instantly adjusted by tapping on the touchscreen.

Quickspec

Street price: £689 with 18-55mm f/3.5-5.6 lens or £599 body only
Resolution: 24.2Mp (6000x4000px)
Format: RAW & JPEG
Sensor: APS-C CMOS (22.3x14.9)
ISO: 100-12,800 (25,600 expanded)
Shutter: 30-1/4000sec & Bulb
AF system: TTL-CT-SIR AF system with 19 cross-type AF points
Focusing modes: Auto (AI Focus), Continuous (AI Servo), Single (One Shot), and Manual focus (MF)
Metering: Evaluative, Partial, Center-weighted and Spot
Burst rate: 5fps
Monitor: 3in 1040k-dot Vari-angle touchscreen LCD
Viewfinder: Optical 95% coverage
Pop-up flash: Yes **Hotshoe:** Yes
Video: Full HD 1080p @30fps
Write speeds: 0.7secs RAW, 0sec Extra Fine JPEG
Storage: SD, SDHC and SDXC
Weight: 555g (body only)
Dimensions: (WxHxD) 131.9x100.7x77.8mm
Visit: *www.canon.co.uk*

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OUT NOW! The 2015 edition of The Freelance Photographer's Market Handbook

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Price: £14.95 + £2.00 P&P



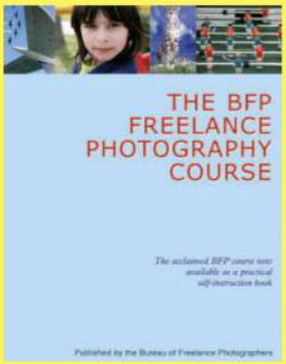
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TIPA AWARDS 2015

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40 YEARS OF Kenro

View, the 750D uses Canon's new Hybrid CMOS AF III system, which includes features like Face Detection and Tracking AF.

For the first time on a Canon model, the camera is both Wi-Fi and NFC enabled, so it can be paired with a smartphone or tablet allowing for remote operation or instant image sharing to upload to the web.

Performance & Handling

The 750D is very comfortable in the hand. The front grip is ample to clasp your fingers around and the rear, rubberised thumbpad helps to anchor it. It's reasonably lightweight, too. The body is constructed from a combination of aluminium alloy and polycarbonate resin with glass fibre, meaning it's tough, but not heavy around your neck.

All of the shooting controls are situated on the right-hand-side of the body, so you can adjust everything with just your finger and thumb, making operation ergonomic. The top-plate is dominated by a rotating mode dial, where you'll find the usual M,A,S,P modes, full Auto, Creative Auto and a number of Scene modes.

The Quick Menu button brings up a host of extra parameters on the rear LCD, such as burst mode, metering and image format. These can all be quickly adjusted by tapping on the touchscreen itself. This saves time by not having to dive into the main menus – which themselves are well laid out – and makes the entire handling process much more enjoyable with its efficiency.

The 3in 1040k-dot monitor flips out from the body and rotates through 270°, allowing you to compose from almost any conceivable angle, as well as take selfies, if you feel the urge.



The 750D boasts the latest technology like a vari-angle touchscreen, as well as Wi-Fi and NFC to help you share on the web.

When using Live View, the AF point can be set by simply tapping the screen with your finger. It focuses faster than you'd expect too, considering most DSLRs are a little sluggish when it comes to working with Live View. Setting up Face Detection is easy, and means the people in your shots are always sharp.

Focusing through the viewfinder is even quicker. We found the 750D performed admirably in a range of challenging lighting situations, and switching between the AF grouping modes is easy with the overlaid Viewfinder Information.

The DIGIC 6 processor also impressed. When shooting JPEG at a top speed of 5fps, we could fire off hundreds of frames without any lag from the camera. It simply didn't slow down. Single JPEGs were saved to our 95MB/s PNY SDHC test card instantaneously. Switching to RAW, we rattled off a burst of 11 shots before the pace stuttered, and these were written in 1.7secs. A single RAW took just 0.7secs to save to the card.

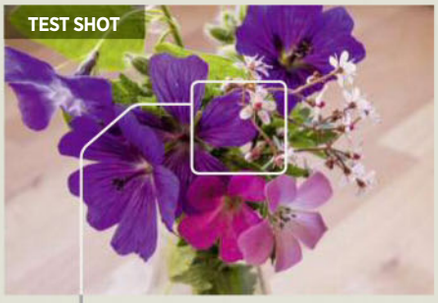


Image quality ISO, JPEG & RAW image test results

The 750D has an ISO range of 100-12,800, and at the lower ISO settings we found our images were smooth and free from grain. At ISO 800, both Luminance Noise (grain) and Colour Noise (red and green speckles) subtly appeared on our RAW files. This became more evident as the ISO sensitivity increased, but was easy to resolve with Noise Reduction software. The JPEGs suffered less, as Noise was controlled by in-camera processing, but gave a more 'waxy' finish.











When shooting JPEG at a top speed of 5fps, we could fire off hundreds of frames without any lag from the camera

Value for Money

The 750D with the 18-55mm f/3.5-5.6 lens costs £689, or it can be purchased for £599 body-only. This places it firmly on a par with its rivals in the entry-level arena, though we expect the price to drop a little in the coming months. Its key competitor is the Nikon D5500, priced at £626 with an 18-55mm kit lens. This features a 24.2Mp sensor, shoots at 5fps, also has Wi-Fi and sports a Vari-angle touchscreen.

Alternatively, the Pentax K-S2 is worth considering. It's currently priced at £599 with an 18-50mm f/4-5.6 lens. It has a 20.1Mp sensor, an ISO range of 100-51,200 and will fire at 5.4fps.

DIGITAL PHOTO THE VERDICT

If you're looking for an entry-level DSLR, and want one of the latest models packed with up-to-date technology, then the Canon 750D is a very worthy option. The new sensor is the second largest in Canon's entire line-up, outsizing even the highly-prized 5D MkIII, and it delivers fantastic image quality to boot. The speedy processor makes operation pretty seamless, and gives the camera great low-light capability too. The vari-angle touchscreen is much more than a gimmick – it makes handling the camera truly streamlined, and the ability to compose shots away from your eyeline gives you a far greater creative scope.

While there are currently more affordable options out there, if this camera falls within your budget then you should definitely pay it serious attention. As far as enthusiast DSLRs go, it's a very capable bit of kit.

Features & build	★★★★★
Performance	★★★★★
Image quality	★★★★☆
Value for money	★★★★☆
Overall score	★★★★★



TIFFEN DFX / $129.99

TIFFEN DFX 4



Tiffen used to be known in photography for their gels and filters, but as the digital age shifts the emphasis to post-production, will its software prove as popular?

TEST BY ANDY HEATHER

Quickspec

Street Price: Standalone $129.99, plug-in available for $149.99 USD, Video plug-in $499.95 USD (download)
Compatibility Plug-in version compatible with Adobe Photoshop/Photoshop Elements, Adobe Lightroom and Apple Aperture if installed and activated on same machine. Dfx video plug-in compatible with Adobe After Effects and Premiere Pro, Apple Final Cut Pro X, Apple Motion 5, and Avid Editing Systems if installed and activated on same machine
Free trial available: Yes (15 days)
Min System requirements
Windows: Intel or AMD processor with 64-bit support, Microsoft Windows 7, Windows 8
Mac: 64-bit Intel processor, Mac OS X v10.8-10.10
Both: 4GB of RAM (8 GB recommended), 1GB of available hard-disk space, 1GB of Video RAM, NVIDIA GTX 460 or better AMD Radeon 57xx series or better OpenCL 1.0 capable graphic card
Visit: *software.tiffen.com*

TIFFEN DFX 4 IS A standalone image editing application which is also available as a plugin for Adobe Photoshop, Photoshop Elements, Lightroom or Apple Aperture. Boasting 134 individual filter libraries – each with its own set of Presets – Dfx 4 can be used to create a wide variety of looks, including some that replicate Tiffen's own lens filters.

If you've been interested in photography for a while, you'll remember when attaching filters to your lenses was more common than shooting in RAW and creating effects in software. Tiffen is a company traditionally associated with filters, but it has adapted to the changes in the way we shoot and now offers its distinctive photographic effects filters in Dfx 4.

Initial impressions

The application contains hundreds of Presets that replicate the aesthetics of genuine film emulsions from yesteryear. However, Dfx differs from your average film stock simulation software in that it offers a range of other editing options besides.

In this latest version, the image processing engine is slicker and smoother than ever thanks to some clever, under-the-bonnet improvements that we'll touch on a little later.

Not only do each of the 134 filter libraries contain a variety of Presets to choose from, but you can make your own Presets too. This is done by opening an existing Preset and adjusting its values in the Parameters panel. The vast number of Presets built into the application will keep fans of slider tweaking happy for hours. Dfx 4 is much deeper than it appears at first glance and can be used to create a huge variety of effects – from simple corrections to complete image overhauls.

What's new?

The biggest change in Version 4 for those familiar with earlier Dfx software will be the introduction of GPU acceleration. Dfx 4 now uses the OpenCL standard to take advantage of your system's graphic processors. This new GPU acceleration greatly speeds up the workflow and allows effects to be previewed much faster than in previous versions.

Also featured in Dfx 4 are 12 new Filter Libraries. These are Borders, Cartoon, Colorize Gradient, Detail, Develop, Grunge, Harris Shutter, Pastel, Pearlescent, Radial Tint, Satin and Tone Adjust. As well as the new Libraries, users have access to existing favourites such as Film Stocks, which contains 93 versions of historical film types.

For those who want to go beyond the Presets, more parameters and tools have been added. These allow you to alter Color Correction, Tint Enhancement and Gradient Control, to create your own, custom Presets.

In image-editing, it's good practice to retain as much data as possible and avoid compressing files until the very final stage, at which point the image is exported for use. That's why 32-bit floating point precision has grown in popularity among professionals in recent years, and Dfx 4 now incorporates this technology. It is favoured because it allows photographers to tease a greater tonal range out of their RAW files. In Dfx 4, it allows you to selectively edit your image's dynamic range without clipping values in other areas to provide a non-destructive workflow.

New feature Age pics with Grunge filter



The new Grunge filters add dirt, hair, scratches, stains, splotches, vignetting and grain as well as gate weave and flicker to video.

Tiffen has introduced a Curve Tool – similar to that found in Photoshop and Lightroom

Also new to Dfx 4 is an edge-aware smoothing algorithm, which has been added to some filters. This allows for skin smoothing without blurring the sharp edges around a model's face and features.

Tiffen has also introduced a Curve Tool – similar to that found in Photoshop and Lightroom. It's designed to control tonal range through an RGB curve, or via separate red, green and blue curves. This means you can lift shadows and pull back highlights without altering the colour balance, or you can use it to change the hue of the entire image by adjusting a single colour curve. This is an impressive pro-style feature that's not yet available in Elements.

Dfx 4's improved interface now features an optimised preview size. Images can be previewed in 4096, 2048 and 1024 pixels, depending on the size and pixel density of your monitor. New Mac owners will be please to hear that Retina displays are supported, too.

In terms of usability improvements, brush size can now be changed via keyboard shortcuts, just like in Photoshop.

A closer look at the Dfx 4 workflow



Dfx 4 has an interesting layout that's a little different to the programmes you're probably used to editing in. Each filter you apply can be stacked and these appear on the left-hand side of the interface, unlike Photoshop in which the Layers palette sits on the right by default.

When editing your shots, you first select a Filter Library from the Filters window at the bottom, then you select a Preset in the Presets window on the right. Most of the app's advanced tools appear in the presets window, so it's worth exploring everything.

Video uses

Tiffen is not just known for its still photography accessories – its name is also synonymous with video gear, such as the world famous Steadicam. For movie shooters, the Dfx plugin will integrate with Final Cut Pro X and a variety of other editing applications, allowing you to apply filters to entire scenes. Dfx is therefore likely to appeal to those who work with video production as well as stills.

Value for money

The standalone version of Tiffen Dfx 4 is available for $129.99 and works without host software. Converting for the exchange rate at the time of going to press, that's just over £82. Adobe's Lightroom, which has become a great file organisation tool, as well as an editing powerhouse, costs just £103.88 and arguably represents better value for money if you can stretch to the extra £21. Unlike Lightroom, Dfx doesn't handle file organisation, so you'll have to do that part manually. However, photographers who don't yet own a copy of Lightroom, Elements or Photoshop might find that its extensive selection of filters make it a viable option for most of their image editing needs.

Dfx 4 is slightly unusual in that, by default, it places its Layers palette on the left, its Filter Libraries along the bottom and its Presets on the right.

Those used to Lightroom-style editing apps may find this counter-intuitive, but if you're new to editing software and have no preconceptions, this unique layout should be easy to adapt to.

If you're a fan of previous versions of Dfx and you're thinking of upgrading, version 4.0 comes recommended for the GPU acceleration alone. If you haven't tried it yet, now's the perfect time to download the free trial version and see how it fits into your image-making.

Try out *Dfx 4* for free

Available on Tiffen's website is a free 15-day trial download of Dfx 4. After inputting your email address, you'll be given a link to a package which contains trial versions of Dfx Standalone, Dfx for Adobe Photoshop CS6 (32 bit), Dfx for Adobe Photoshop CS6 (64 bit), Dfx for Adobe Photoshop Elements 12 and Dfx for OFX (for video editing applications). After the trial expires, you'll have to buy a separate licence for each of the components you wish to continue using the package.



To try it out for yourself, go to:
http://software.tiffen.com/products/dfx-products

DIGITAL PHOTO THE VERDICT

Dfx 4 contains a vast array of features that go beyond your standard film stock emulation filters. It can handle lighting effects, mono conversions and much more. The interface could be more intuitive, but Dfx 4 is surprisingly deep. We recommend you download the free trial and give it a go for yourself.

Features	★★★★☆
Interface	★★★☆☆
Performance	★★★★★
Value for money	★★★☆☆
Overall score	★★★☆☆

GADGETS & GIZMOS

MACRO SPECIAL

We review the latest photography and imaging accessories to hit the shelves

TESTS BY DAN MOLD & MATTY GRAHAM



MACRO RAIL / £69

VELBON SUPER MAG SLIDER

Features: Magnesium alloy construction, 2 axis focusing adjuster **Visit:** *www.velbon.co.uk*

THE SUPER MAG SLIDER from Velbon is a focusing rail that moves on two planes. There's 6cm of front-to-back movement and 3cm side-to-side. This may not sound much, but for macro shooting it provides all you need. Two large, knurled knobs give plenty of grip and control the twin rails. They were a little stiff to operate at times, but very precise.

Weighing 470g and made predominantly from a magnesium alloy, it's pretty hefty but feels very durable. It takes up a similar amount of space as a 70-300mm lens with dimensions of 21x12x7cm, so it's easy to take with you.

There's no quick-release plate, so your camera or lens' tripod collar mount has to be attached with the built-in thumbscrew. The top of the camera platform is cork and holds a large DSLR firmly in place. It's boxed with dedicated tools to tighten up the rails if they loosen over time, and to remove the tripod adapter screw which allows 1/4in or 3/8in threads to be used. It's at its best when mounted to a ball or pan and tilt head as this gives full freedom for precise compositions.

THE VERDICT

The Super Mag Slider is a welcome accessory to the kit bag of any keen macro shooter. It may seem a little pricey at £69 but it justifies the cost with a solid build and fantastic focusing precision. Brilliant!

RATING ★★★★★

HOODLOUPE / £120

3.2in HOODLOUPE WITH CINEMA STRAP

Features: +3 diopter adjustment, silicone construction
Visit: *www.thredarkroom.co.uk*



HOODMAN'S H32 is a magnifying loupe designed to fit DSLRs with a 3.2in screen. The loupe is £106 alone and is great for video and macro use as it makes it easy to see what's in focus when using Live View mode. A Cinema strap can be purchased for an extra £14 and allows the loupe to be mounted on a DSLR via two elasticated cords. These are lashed around the camera body, and attaching them diagonally across each side of the lens prevents them from interfering with the lens release button. Secured with cord grips, the cords do hamper access a little to some buttons and dials, but this is easy to work around.

The loupe is made from a rigid silicone and the optics are solid too. The screen display looks clear and sharp, and a dioptre allows it to be tuned to your eyes.

The standard eyepiece is quite hard and a little uncomfortable to use for long periods, though a more comfortable teardrop-shaped eyepiece is available for a further £29.99. The loupe comes with a neck strap and soft pouch.

THE VERDICT

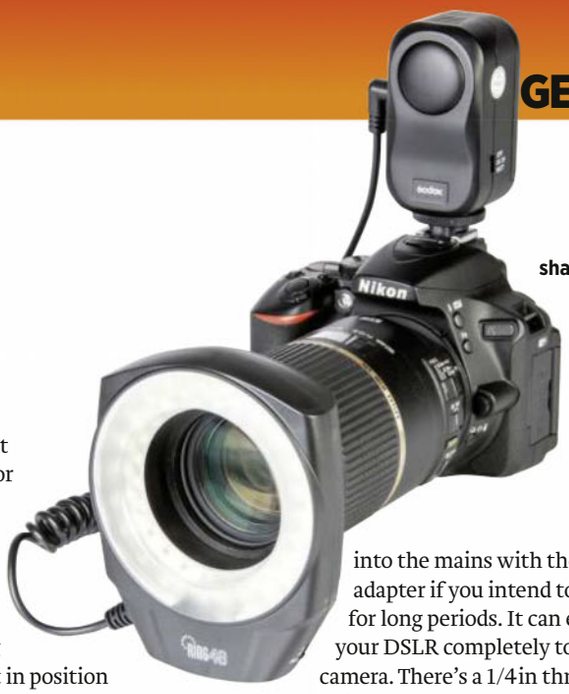
The Hoodloupe is a great tool for fine-focusing in macro and doubles up as a great video accessory, but it doesn't come cheap.

RATING ★★★★☆

RING LIGHT / £35

GODOX LED RING48

Features: 48 LED lights, 3 way power control
Visit: *www.godox.com/en*



The Ring48 from Godox fills in shadows by emitting a constant light around the lens.

THE RING48 LIGHT FROM GODOX is a ringlight designed specifically for macro. Unlike a ringflash which fires a brief but bright flash, the Ring48 has a series of LEDs which emit a constant light source with a colour temperature between 5500-6500k. The LEDs sit all the way round the lens for soft, even lighting.

Although the Ring48 has a working distance of between 3cm and 1m, its constant brightness makes it unsuitable for portraits. It is however a good option for macro and has settings for the full 48 LEDs, just the 24 on the left or the 24 on the right via a switch.

The Ring48 comes with 49mm, 52mm, 55mm, 58mm 62mm and 67mm metal adapters. These screw into your lens' filter thread and the light slips over the top for quick attachment and removal.

The housing spins freely on the adapter. This was a tad annoying as we had to hold it in position to prevent this from happening. That said, it did allow us to fine-tune the lighting when using one side of the LED array.

A cable runs from the light to a power unit which can be mounted on a camera's hotshoe. This unit is quite large with dimensions of 44x90x44mm and takes two AA batteries. Alternatively it can be plugged into the mains with the provided adapter if you intend to shoot indoors for long periods. It can even be taken off your DSLR completely to use it off-camera. There's a 1/4in thread in the base too, for mounting it on a tripod.

THE VERDICT

The Ring48 is great for illuminating small subjects with even lighting, but it's quite bulky and was a little annoying to use as it span around the adapter.

RATING ★★★★☆

LIGHTING ACCESSORY / £19.95

LED MACRO ARM LIGHT

Features: Flexible 16cm LED stalks
Visit: *www.srb-photographic.co.uk*



THE LED MACRO ARM light features two gooseneck metal arms which can be moulded into shape to position its two LEDs lights. They're daylight-balanced with a temperature of 5600K and are video-friendly with no flicker.

The Macro Arm Light locks on to a CSC or DSLR hotshoe with a small thumb wheel. There's an adapter for Sony models too.

The unit is portable, weighing just 44g, and is tall and thin with dimensions of 2.8x20cm. The adjustable arms are 16cm long so there's a little more flexibility with a smaller CSC than a DSLR, and it's not so effective with some longer, full-frame macro lenses.

There's a total of eight lighting options – each stalk has a switch for High power, Low power and Off modes. The High setting of the left LED is marginally brighter. This is said to prevent hotspots appearing, but made it harder to achieve even lighting.

A little care has to be taken when bending the arms into shape as the main unit is plastic and could be damaged if the metal arms are pushed too aggressively. They're a little fiddly to position but it's great to be able to adjust their individual positions.

It's powered by two button-like CR2025 Lithium batteries and four are included in the box.

THE VERDICT

The Macro Arm Light is nicely priced, but the different brightness settings restricted ease of use.

RATING ★★★☆☆

EXTENSION TUBES / FROM £29.95

KOOKA EXTENSION TUBES

Features: Three inter-changeable tubes **Visit:** *www.srb-photographic.co.uk*

EXTENSION TUBES FIT BETWEEN the camera and your lens and, by increasing the distance between the two, force the lens to focus closer. Kooka offer tube sets for virtually all camera mounts, including Canon, Nikon, Sony, Pentax and Micro Four-Thirds. The tubes can be bought separately or as a set and the Canon/Nikon bundle includes 12mm, 20mm and 36mm tubes. They can be used individually or stacked together to increase the magnification on your subject.

Our test 24-70mm lens took a little longer to focus and hunted a bit more when mounted. That said, it's often better to focus manually with macro, and the main benefit of these tubes is the ability to control the aperture.

Stacking all three tubes gives close-up power exceeding the magnification of a macro lens. They do reduce the light reaching the sensor though, so shutter speeds are longer. But this is simple to fix by using a tripod.



THE VERDICT

For the money, the Kooka extension tubes offer great value, decent build quality and the opportunity to get in extremely close to a subject when working with your everyday lens.

RATING ★★★★★









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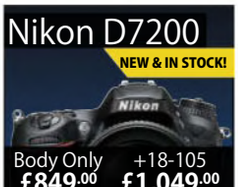
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50mm f/1.2 L USM	£1,000.00	TSE 17mm f/4.0L	£1,599.00	EF-S 55-250mm f/4 5.6 IS STM	£200.00*
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50mm f/1.8 STM	£129.00	TSE 90mm f/2.8	£1,124.00	70-200mm f/4.0L IS USM	£839.00
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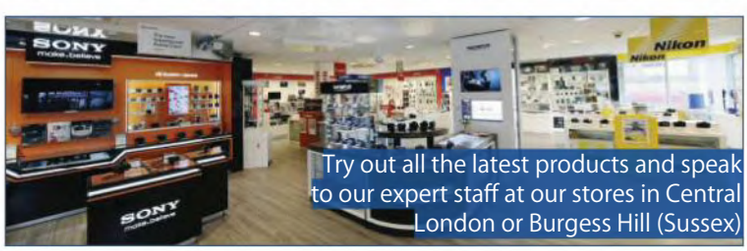


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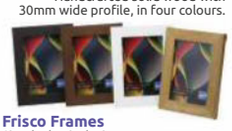
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Smooth Pearl 310gsm:
6x4 100 sheets £14.99
7x5 100 sheets £17.99
A4 25 sheets £12.99
A4 100 sheets £39.99
A4 250 sheets £84.99
A3 25 sheets £25.99
A3+ 25 sheets £35.99
17" Roll 30 metres £69.99
24" Roll 30 metres £96.99
Smooth Gloss 310gsm:
6x4 100 sheets £14.99
7x5 100 sheets £17.99
A4 25 sheets £12.99
A4 100 sheets £39.99
A3 25 sheets £25.99
A3+ 25 sheets £35.99
Premium Matt Duo 200 gsm:
A4 50 sheets £12.99
A3+ 50 sheets £34.99
Heavy Duo Matt 310gsm:
A4 50 sheets £17.99
A3+ 50 sheets £44.99
Gold Fibre Silk 310gsm:
A4 50 sheets £37.99
A3+ 50 sheets £89.99
Gold Mono Silk 270gsm:
A4 25 sheets £16.99
A3+ 25 sheets £42.99

Fotospeed

Smooth Pearl 290gsm:
6x4 100 sheets £12.99
7x5 100 sheets £16.99
A4 50 sheets £17.99
A3 50 sheets £34.99
A3+ 25 sheets £25.99
Panoramic 25 sheets £26.99
17" Roll 30 metres £68.99
24" Roll 30 metres £85.99
PF Lustre 275gsm:
6x4 100 sheets £12.99
7x5 100 sheets £16.99
A4 50 sheets £17.99
A3 25 sheets £35.99
A3+ 50 sheets £47.99
Panoramic 25 sheets £26.99
17" Roll 30 metres £69.99
24" Roll 30 metres £86.99
PF Gloss 270gsm:
A4 50 sheets £17.99
A3 50 sheets £35.99
A3+ 50 sheets £47.99
Panoramic 25 sheets £26.99
Matt Ultra 240gsm:
A4 50 sheets £12.99
A3 50 sheets £26.99
A3+ 50 sheets £35.99
Fine Art / Fibre Base Papers:
Baryta A4 20 sheets £21.99
Bartya A3 20 sheets £42.99
Etching A4 25 sheets £19.99
Etching A3 25 sheets £34.99
Smooth Cotton A4 25 sh £24.99
Smooth Cotton A3 25 sh £51.99

Canon

PP-201 Plus Gossy II 275gsm:
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7x5 20 sheets £11.99
A4 20 sheets £11.99
A3 20 sheets £27.99
A3+ 20 sheets £36.99
PT-101 Pro Platinum 300gsm:
6x4 20 sheets £7.99
A4 20 sheets £16.99
A3 20 sheets £37.99
A3+ 10 sheets £24.99
SG-201 Semi-Gloss 260gsm:
6x4 50 sheets £9.99
A4 20 sheets £11.99
A3 20 sheets £27.99
A3+ 20 sheets £42.99
LU-101 Pro Lustre 260gsm:
A4 50 sheets £14.99
A3 50 sheets £32.99
A3+ 50 sheets £49.99

Permajet

Smooth Pearl 280gsm:
6x4 100 sheets £12.99
7x5 100 sheets £18.99
A4 50 sheets £18.99
A4 50 sheets £18.99
A3 50 sheets £35.99
A3+ 25 sheets £28.99
17" Roll 30 metres £64.99
24" Roll 30 metres £89.99
Ultra Pearl 295gsm:
6x4 100 sheets £14.99
7x5 100 sheets £20.99
A4 25 sheets £12.99
A3 25 sheets £22.99
A3+ 25 sheets £30.99
13" Roll 10 metres £21.99
17" Roll 30 metres £68.99
24" Roll 30 metres £92.99
Titanium Lustre 280gsm:
A4 25 sheets £22.99
A3 25 sheets £44.99
A3+ 25 sheets £62.99
Oyster 271gsm:
6x4 100 sheets £12.99
7x5 100 sheets £18.99
A4 50 sheets £18.99
A3 25 sheets £22.99
A3+ 25 sheets £28.99
13" Roll 10 metres £26.99
17" Roll 30 metres £64.99
24" Roll 30 metres £89.99
Gloss 271gsm:
6x4 100 sheets £12.99
7x5 100 sheets £18.99
A4 50 sheets £18.99
A3 25 sheets £22.99
A3+ 25 sheets £28.99
13" Roll 10 metres £26.99
17" Roll 30 metres £64.99
24" Roll 30 metres £89.99
Matt Plus 240gsm:
6x4 100 sheets £10.99
7x5 100 sheets £13.99
A4 50 sheets £13.99
A3 25 sheets £17.99
A3+ 25 sheets £22.99
13" Roll 10 metres £24.99
17" Roll 30 metres £42.99
24" Roll 30 metres £58.99
Matt Proofing 160gsm:
A4 150 sheets £18.99
A3 75 sheets £22.99
17" Roll 30 metres £26.99
24" Roll 30 metres £36.99
Double Sided Matt 250gsm:
A4 100 sheets £24.99
A3 50 sheets £27.99
Fine Art / Fibre Base Papers:
FB Gold Silk A4 25 sh £23.99
FB Gold Silk A3 25 sh £47.99
FB Distinction A4 25 sh £25.99
FB Distinction A3 25 sh £48.99
FB Royal A4 25 sheets £28.99
FB Royal A3 25 sheets £56.99
FB Gloss A4 25 sheets £26.99
FB Gloss A3 25 sheets £51.99
FB Matt A4 25 sheets £19.99
FB Matt A3 25 sheets £38.99
Artist A4 25 sheets £22.99
Artist A3 25 sheets £39.99
Museum A4 25 sheets £25.99
Museum A3 25 sheets £48.99
Parchment A4 25 sheets £22.99
Parchment A3 25 sheets £39.99
Omega A4 25 sheets £24.99
Omega A3 25 sheets £46.99
Portrait A4 25 sheets £26.99
Portrait A3 25 sheets £53.99

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A4 15 sheets +15 FREE £9.99
A3 20 sheets £29.99
A3+ 20 sheets OFFER £24.99
Ultra Gloss 300gsm:
6x4 50 sheets £9.99
7x5 50 sheets £12.99
A4 15 sheets £11.99
Premium Semi-Gloss 251gsm:
6x4 50 sheets £8.99
A4 20 sheets £14.99
A3 20 sheets £29.99
A3+ 20 sheets OFFER £24.99
Archival Matte 192gsm:
A4 50 sheets £14.99
A3 50 sheets £33.99
A3+ 50 sheets £44.99
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A3 50 sheets £34.99
A3+ 50 sheets £44.99

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Delkin CF Card (x4) Case	£6.99

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NB-5L for Canon	£9.99
NB-6L for Canon	£9.99
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NB-9L for Canon	£9.99
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BP-511 for Canon	£12.99
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LP-E12 for Canon	£12.99
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NP95 for Fuji	£9.99
NPW126 for Fuji	£12.99
NP400 for Fuji	£12.99
EN-EL3E for Nikon	£14.99
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EN-EL10 for Nikon	£9.99
EN-EL11 for Nikon	£9.99
EN-EL12 for Nikon	£9.99
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BLN-1 for Olympus	£24.99
BLS-1 for Olympus	£12.99
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DMW-BLB13 Panasonic	£27.99
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D600 for Nikon	£84.99
D800/D810 for Nikon	£84.99
D3300/D5300 for Nikon	£74.99
D7100 for Nikon	£84.99

Battery Chargers

Universal Chargers

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Unipal PLUS	£24.99
Unipal EXTRA	£29.99

AA & AAA Chargers

Hahnel TC Novo inc. 4xAA	£8.99
Energizer Pro inc. 4xAA	£14.99
Energizer 1 Hr inc. 4xAA	£22.99

Other Batteries

Pre-Charged Rechargables

AA GP Recyko 3+1 FREE	£5.24
AAA GP Recyko 3+1 FREE	£5.24
AA Energizer Extreme (4)	£8.99
AAA Energizer Extreme (4)	£6.99

Standard Rechargeables

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AA Lloytron 1300mAh (4)	£3.99
AA Lloytron 2700mAh (4)	£6.99
AAA Lloytron 1100mAh (4)	£3.99

Lithium Batteries

AA Energizer Ultimate (4)	£5.99
AAA Energizer Ultimate (4)	£5.99
CR123A Energizer (1)	£1.99
CR2 Energizer (1)	£1.99
2CR5 Energizer (1)	£3.99
CRP2 Energizer (1)	£3.99
CRV3 Energizer (1)	£5.99
A544 Energizer Alkaline (1)	£1.99
A23 Energizer Alkaline (1)	£1.99
LR44 Energizer Alkaline (2)	£1.99
CR2025, **CR2032** etc	£1.99

Filters



One of the largest ranges of screw-in threaded filters in the UK, from Hoya, Kood and Marumi. We carry sizes from 24mm, up to 105mm, and offer Clear Protectors, UVs, Skylights, Circular Polarisers, ND4s, ND8s, ND16s, ND32s, ND64s, ND500s, ND1000s, Variable NDs, Starbursts, Close Up Sets and more! Below are just a few examples...

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UV Filters

37mm	£4.99
40.5mm	£4.99
46mm	£4.99
49mm	£4.99
52mm	£4.99
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58mm	£6.99
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67mm	£8.99
72mm	£9.99
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49mm	£12.99
52mm	£14.99
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62mm	£19.99
67mm	£22.99
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86mm	£39.99

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Marumi DHG Slim Frame Multi-coated

Clear Protectors

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46mm	£10.99
49mm	£10.99
52mm	£10.99
55mm	£11.99
58mm	£12.99
62mm	£14.99
67mm	£15.99
72mm	£17.99
77mm	£19.99
82mm	£22.99

Marumi DHG Slim Frame Multi-coated

UV Filters

52mm	£13.99
58mm	£15.99
62mm	£17.99
67mm	£19.99
72mm	£21.99
77mm	£24.99

Marumi DHG Slim Frame Multi-coated

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52mm	£31.99
58mm	£35.99
62mm	£39.99
67mm	£44.99
72mm	£49.99
77mm	£54.99
82mm	£69.99

Hoya HMC Slim Frame

UV Filters

37mm	£12.99
40.5mm	£12.99
46mm	£12.99
49mm	£11.99
52mm	£11.99
58mm	£14.99
62mm	£16.99
67mm	£18.99
72mm	£21.99
77mm	£25.99
82mm	£29.99

HOYA Pro-1D Slim Frame Multi-coated

Clear Protectors

52mm SPECIAL	£16.99
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62mm	£31.99
67mm	£35.99
72mm	£39.99
77mm SPECIAL	£29.99
82mm	£49.99

HOYA Pro-1D Slim Frame Multi-coated

Circular Polarisers

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62mm	£67.99
67mm	£75.99
72mm	£90.99
77mm SPECIAL	£79.99
82mm	£120.99

Square Filters



We stock three widths of square filters: A-type (67mm wide), P-Type (84mm wide) and Z-Type (100mm wide). Made in the UK, Kood square filters are optically flat, with excellent colour density, neutrality and stability. They received a maximum 5 star rating from Digital Camera Magazine.

P-Type: 84mm wide filters

Standard Holder	£5.99
Wide Angle Holder	£6.99
Filter Wallet for 8 filters	£9.99
Adapter Rings 49-82mm	£4.99
Circular Polariser	£27.99
ND2 Solid	£12.99
ND2 Soft Graduated	£13.99
ND2 Hard Graduated	£13.99
ND4 Solid	£12.99
ND4 Soft Graduated	£13.99
ND4 Hard Graduated	£13.99
ND8 Solid	£14.99
ND8 Soft Graduated	£15.99
ND8 Hard Graduated	£15.99
Light Blue Graduated	£12.99
Dark Blue Graduated	£12.99
Light Tobacco Graduated	£12.99
Dark Tobacco Graduated	£12.99
Light Sunset Graduated	£14.99
Dark Sunset Graduated	£14.99
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A popular kit containing an ND2, ND2 Soft Grad, ND4, ND4 Soft Grad, Filter Holder, plus Adapter Ring of your choice (49-82mm).

Z-Type: 100mm wide filters

Pro Holder	£24.99
Adapter Rings 52-95mm	£8.99
ND2 Solid	£16.99
ND2 Soft Graduated	£17.99
ND2 Hard Graduated	£17.99
ND4 Solid	£16.99
ND4 Soft Graduated	£17.99
ND4 Hard Graduated	£17.99
ND8 Solid	£18.99
ND8 Soft Graduated	£19.99
ND8 Hard Graduated	£19.99
Light Blue Graduated	£17.99
Dark Blue Graduated	£17.99
Light Tobacco Graduated	£17.99
Dark Tobacco Graduated	£17.99
Light Sunset Graduated	£18.99
Dark Sunset Graduated	£18.99

A-Type: 67mm wide filters

Standard Holder	£4.99
Adapter Rings 37-62mm	£8.99
ND2 Solid	£10.99
ND2 Graduated	£11.99
ND4 Solid	£10.99
ND4 Graduated	£11.99
ND8 Solid	£11.99
ND8 Graduated	£12.99

Lens Accessories

Bayonet-Fit Lens Hoods

ES-62 Canon 50/1.8	£9.99
ES-71II Canon 50/1.4	£9.99
ET-60 Canon 75-300/4-5.6	£9.99
ET-65B Canon 70-300/4-5.6	£9.99
ET-67 Canon 100/2.8 Macro	£9.99
ET-67B Canon 60/2.8	£9.99
EW-60C Canon 18-55 IS	£7.99
EW-63C Canon 18-55 IS STM	£9.99
EW-73B Canon 18-55 IS	£9.99
EW-78BII Canon 28-135 IS	£9.99
EW-78D Canon 18-200 IS	£9.99
EW-78E Canon 15-85 IS	£12.99
EW-83E Canon 17-40/4.0	£12.99
HB-32 Nikon 18-105 VR	£7.99
HB-45 Nikon 18-55 VR	£7.99

Stepping Rings

25mm to 105mm
160 different sizes £4.99-5.99

Reversing Rings

52mm to 77mm
Canon, Nikon, Sony, Olympus and Pentax £9.99-19.99

Coupling Rings

49mm-77mm £9.99-£11.99

Screw-Fit Lens Hoods

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43mm Metal Hood	£5.99
46mm Rubber Hood	£3.99
46mm Metal Hood	£5.99
49mm Rubber Hood	£3.99
49mm Shaped Petal Hood	£6.99
52mm Rubber Hood	£3.99
52mm Shaped Petal Hood	£6.99
55mm Rubber Hood	£3.99
55mm Shaped Petal Hood	£6.99
58mm Rubber Hood	£3.99
58mm Shaped Petal Hood	£6.99
62mm Rubber Hood	£4.99
62mm Shaped Petal Hood	£7.99
67mm Rubber Hood	£4.99
67mm Shaped Petal Hood	£7.99
72mm Rubber Hood	£5.99
72mm Shaped Petal Hood	£9.99
77mm Rubber Hood	£5.99
77mm Shaped Petal Hood	£9.99

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Lens Caps Centre-Pinch	£2.99
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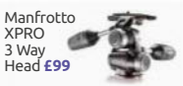


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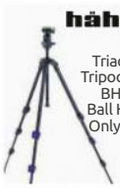




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2 Piece Stay on Case		£192		
BUNDLE OPTIONS Includes FREE Lowepro Scope Travel 200AW Backpack RRP £139				
ATX/STX 25-60x65	£2340	£2103	£210.30	£157.72
ATX/STX 25-60x85	£2850	£2562	£256.20	£192.15
ATX/STX 30-70x95	£3130	£2814	£281.40	£211.05
ATX/STX ACCESSORIES				
TLS APO Apochromat Telephoto Lens System for ATX/STX				£391
DCB II Swing Adapter for ATX/STX				£292
SSR II Telescope Rail				£120
Stay on Case for Objective Modules				£105
Stay on Case for ATX/STX Eyepiece Modules				£97

Lowepro FREE LOWEPRO SCOPE TRAVEL 200AW BACKPACK RRP £139
With all Swarovski ATS/STS or ATX/STX Bundles

SWAROVSKI OPTIK ATS/STS HD HIGH DEFINITION

24 & 36 Months Finance

FREE Swarovski Cleaning Kit worth £30

Giving you all the features that you would look for in a lightweight, reliable spotting scope; providing the perfect start for anyone taking an interest, for instance, in the world of birdwatching.

24 & 36 MONTHS FINANCE AVAILABLE

	RRP	NOW	10% Deposit	Monthly Payment From
ANGLED OR STRAIGHT				
ATS/STS HD 65mm	£1180	£1059	£107	£34.52
ATS/STS HD 80mm	£1690	£1520	£152	£49.55
BUNDLE OPTIONS - ANGLED OR STRAIGHT Includes FREE Lowepro Scope Travel 200AW Backpack RRP £139				
ATS/STS HD 65mm c/w 20-60x zoom	£1724	£1434	£144	£46.74
ATS/STS HD 80mm c/w 20-60x zoom	£2224	£1889	£189	£61.58
ATS/STS ACCESSORIES			**EYEPIECES**	
TLS 800 Telephoto Lens for your SLR	£435		30x 58W Extra Wide Eyepiece	£299
DCB II Swing Adapter	£278		20-60x S Zoom Eyepiece	£369
SSR II Telescope Rail	£120		25-50x W Zoom Eyepiece	£450
Stay on Case	£174			

PA-i5 ADAPTER
Turn your iPhone in a single motion into a telephoto zoom lens.
for iPhone 5/5s £115
Additional Adapters £17

DIGISCOPING with SWAROVSKI OPTIK

ATX + STX

Adapter Ring For PA-i5 iPhone Digiscoping	£17	DCB-S Digital Camera Base Inc. Balance Rail (Straight)	£299
T2 Adaptor - Canon	£21.99	TLS APO Apochromat Telephoto Lens System for ATS/STS (Includes DR-X Sleeve)	£362
T2 Adaptor - Nikon	£21.99	TLS APO Apochromat Telephoto Lens System for ATX/STX (includes DR-X Sleeve)	£362
PA-i5 Digiscoping Adapter For iPhone 5, 5S	£115	TLS 800 Telephoto Lens for your SLR, fits ATS/STS/ATM/STM	£435
SSR II Spotting Scope Rail For ATX, STX, ATS, STS, ATM, STM	£120		
DCB II Swing Adapter for ATS/STS- ATM/STM	£278		
DCB II Swing Adapter for ATX/STX	£278		

SWAROVSKI OPTIK EL SWAROVISION IN A CLASS OF ITS OWN

THE ULTIMATE BIRDING BINO

FREE Swarovski Cleaning Kit worth £30*

24 & 36 Months Finance

State-of-the-art optics with SWAROVISION technology, offering the benefits of comfortable use, elegant design, an ergonomic wrap-around grip and ultimate functionality.

24 & 36 MONTHS FINANCE AVAILABLE

	RRP	NOW	10% Deposit	Monthly Payment From
8x32 Swarovision EL	£1600	£1440	£144	£46.94
10x32 Swarovision EL	£1630	£1467	£146.70	£47.82
8.5x42 Swarovision EL	£1960	£1764	£176.40	£57.50
10x42 Swarovision EL	£1980	£1782	£178.20	£58.09
10x50 Swarovision EL	£2110	£1899	£190	£61.90
12x50 Swarovision EL	£2130	£1917	£191.70	£62.49

FREE Swarovski Cleaning Set worth £30 with Swarovski Binos

24 & 36 Months Finance

SLC SWAROVSKI OPTIK

PERFECTION MEETS TRADITION

Compact & slim, great for using when you're observing wildlife, whether during the day or at twilight.

24 & 36 MONTHS FINANCE AVAILABLE

	RRP	NOW	10% Deposit	Monthly Payment
SLC 8x42	£1310	£1179	£118	£38.43
SLC 10x42	£1380	£1242	£124.20	£48.48
SLC 8x56	£1830	£1499	£165	£53.75
SLC 10x56	£1880	£1695	£170	£55.25
SLC 15x56	£1930	£1739	£174	£56.69

EL TRAVELER EXPERIENCE THE MOMENT
Crystal-clear optics with a large field of view

	RRP	NOW
8x32	£1600	£1440
10x32	£1630	£1470

CL COMPANION ALWAYS BY YOUR SIDE
The number one compact, lightweight binocular

	RRP	NOW
8x30	£830	£747
10x30	£850	£765

CL POCKET COMPACTS PUTS THE WORLD IN YOUR POCKET
Outstanding optical clarity

	RRP	NOW
8x25	£550	£495
10x25	£590	£530

* FREE Cleaning Kit is not applicable to compact binoculars

Leica PREMIER AUTHORISED DEALER — APO TELEVID SPOTTING SCOPES

Ruggedly engineered construction with a compact design. Offering a wide field of view with high colour fidelity, pin-sharp detail resolution & maximum contrast.

FREE LOWEPRO SCOPE TRAVEL 200AW BACKPACK RRP £139 WITH EVERY LEICA BUNDLE

	RRP	NOW
APO Televid 82 Angled or Straight c/w 25-50x WW	£3230	£2699
APO Televid 65 Angled or Straight c/w 25-50x WW	£2630	£2199
Leica Stay on Case was £180 NOW ONLY £155	Photo Adaptor RRP £520 NOW £469	
SKUA Stay on Case	£79	Leica 1.8x Extender £299

BUNDLE DEALS... PLUS FREE Tripod Carrying System RRP £69 with TSN 883

SAVE £700

SAVE £300

Kowa TSN 663/664

Kowa TSN 883/884

Kowa TSN 601/2

	RRP	NOW
TSN 663 c/w 25-60x & 50x	£1599	£1399
TSN 883/884 c/w 25-60x, 50x & Tripod Carrying System	£2999	£2259
Kowa Eyepieces	from £195	
Kowa Stay on Cases	from £49	
TSN 601 - Body Only	£1523	£1399
TSN 601 c/w 25-60x & 50x	£1699	£1515

DIASCOPE SPOTTING SCOPES — ZEISS

ZEISS PREMIER DEALER

SAVE UP TO £596

12 Months Interest Free Credit

Innovative high performance spotting scopes with dual focus system and wide panorama field of view, unmatched brilliant imaging and up to 75x zoom

12 MONTHS INTEREST FREE CREDIT

	RRP	10% Deposit	Monthly Payment
COMBINATIONS			
65 T*FL Angled or Straight c/w 15-56x Eyepiece	£2230 £1699	£170	£55.23
85 T*FL Angled c/w 20-75x Eyepiece	£2695 £2099	£210	£68.24

Manfrotto CARBON FIBRE TRIPODS — DEAL OF THE MONTH

SAVE £55

SAVE UP TO £150

BEFREE Aluminium Travelling Tripod RRP £174.95 NOW £119

• Carbon Fibre

	RRP	NOW
MT190 CX PRO3	£344.95	£225
MT190 CX PRO4	£359.95	£239
MT155 CX PRO3	£394.95	£244
MT155 CX PRO4	£359.95	£279

Lowepro OPTICS SERIES

Scope Photo Travel 350 AW - Backpack
RRP £189 **£99**

Scope Travel 200 AW - Backpack
RRP £139 **£69**

HIDE CLAMPS & MOUNTS

Opticron Car Window Mount £46	Opticron BC-2 Hide Mount £79	Opticron Universal Mount £55
Velbon Hide Clamp £45.99	Leupold Window Mounts £84.99	Manfrotto Column Clamps from £74.99

SWAROVSKI OPTIK Birding Tripods — Ideal for Birdwatching

Aluminium Tripods	
AT101	£179
AT101 c/w DH101 Head	£349
Carbon Fibre Tripods	
CT Travel c/c DH101 Head	£489
CT101 c/w DH101 Head	£499

Manfrotto BIRDING TRIPODS

ALUMINIUM TRIPODS
190 X Pro 3 New £159.99
190 X Pro 4 New £169.99
055 X Pro 3 New £169.99

CARBON FIBRE TRIPODS
190 CX Pro 3 New £289.99
190 CX Pro 4 New £299.99
055 CX Pro 3 New £339.99
055 CX Pro 4 New £359.99

FLUID HEADS
128 RC £63.99
200 RC2 £59.99
MVH 500AH £119.99
MVH 502 £169.99

ACCESSORIES
Tripod Bags from £28
Quick Release Plates from £13

GITZO TRIPODS

	RRP	NOW
GT1531	£529.95	£425.99
GT2541	£709.95	£499.99
GT2542LS	£719.99	£599.99
GH1720QR 2 Way Head	£234.95	£194.99
GH2720QR 2 Way Head	£279.95	£249.99
G5370 MC QR Plate	£41.95	£34.99

Velbon BIRDING TRIPODS

	RRP	NOW
Sherpa 200R c/w PH157Q Head	£110	£63
Sherpa 5370D c/w PH157Q Head	£169.99	£79
GEO E643D Carbon Fibre c/w QHD 63D B&S Head	£375	£258

SLIK D3 MASTER CLASSIC TRIPOD

Bill Oddie's favourite

Comes complete with 2 Way Pan Head (RRP £195) **OUR PRICE £139**

Nikon TRAVELITE EX LIGHTWEIGHT & COMPACT FOR MORE VERSATILE USE

Versatile, all-round binoculars with a compact, lightweight body, multilayer lens coating. With a highly durable, waterproof and fog-free construction.

	RRP	NOW
EX 8x25	£135.99	£79
EX 9x25	£145.99	£85
EX 10x25	£155.99	£89
EX 12x25	£165.99	£95
V 8-24x25	£219.99	£89

PROSTAFF 5 THE NEWEST WORD/HORSE OF NIKON OPTICS
superb optics, ergonomic design and waterproof, fogproof performance.

	RRP	NOW
8x42	£219.99	£189.99
10x42	£239.99	£209.99
10x50	£249.99	£219.99
12x50	£269.99	£239.99

MONARCH 7 A ROYAL INVITATION TO THE MAGNIFICENCE OF NATURE
Exquisite optical performance in a compact body delivering a wide field of view

	RRP	NOW
8x30	£319.99	£269.99
10x30	£349.99	£299.99
8x42	£549.99	£469.99
10x42	£599.99	£499.99

HIGH GRADE LIGHT WHEN ONLY SUPERIOR PERFORMANCE WILL DO
These binoculars fit comfortably within your hands and are equipped with outstanding features.

	RRP	NOW
8x32	£991.99	£579.99
10x32	£1043.99	£599.99
8x42	£1355.99	£699.99
10x42	£1459.99	£749.99

CONQUEST COMPACTS — ZEISS

Rugged, ergonomic design in a tough, resilient package. Bright, sharp images and enhanced twilight vision.

	RRP	NOW
8x20 T*	£355	£299
10x25 T*	£410	£339

VICTORY COMPACTS

These high-performance binoculars of the Victory range stand out for their excellent image performance and are also ideal for those who wear glasses

	RRP	NOW
8x20 T*	£530	£439
10x25 T*	£560	£459

VICTORY HT THE BRIGHTEST PREMIUM BINOCULARS IN THE WORLD
The brightest premium binoculars in the world with a transmission level of 95%+ for greater brightness and longer observation

	RRP	NOW
8x42	£1895	£1399
10x42	£1725	£1429
8x54	£1910	£1849
10x54	£1950	£1899

CONQUEST HD THE MODERN OBSERVATION OPTICS
Discover the smallest details, experience the greatest moments.

	RRP	NOW
8x32	£685	£599
10x32	£725	£639
8x42	£795	£699
10x42	£825	£739
8x56	£1160	£1099
10x56	£1195	£1099
15x56	£1265	£1199

VICTORY SF WORLD'S BEST BIRDING & NATURE OBSERVATION BINOCULARS
You can experience every spectacle nature has to offer with brilliant optics and an unparalleled wide-angle field of view.

	RRP
8x42	£2050
10x42	£2075

See website for more details

DIGITAL SLR's



D7200
DIGITAL SLR Nikon

Step up to excellence with the sophisticated D7200. This nimble DX-format D-SLR delivers sumptuous stills, excels at video, & is fully connected. It's fast, versatile, & ready to match your every ambition.

Body Only RRP £939.99 **£889.99**
c/w Nikon 18-105mm RRP £1119.99 **£1089.99**



D3200
c/w 18-55mm VR lens
£279 RRP £350.99



D3300
Body Only
£349 RRP £399.99
c/w 18-55mm VR II
£389 RRP £489.99



D5200
c/w 18-55mm VR lens
c/w 18-55mm VR II
£429 RRP £499.99



D5300
Body Only
£499 RRP £579.99
c/w 18-55mm VR II
£549 RRP £679.99



D5500
Body Only
£589 RRP £639.99
c/w 18-55mm VR II
£689 RRP £719.99
c/w 18-140mm VR
£849 RRP £899.99



D7000
Body Only
£599.99 RRP £789.99



D7100
Body Only
£749 RRP £849.99
c/w 18-105mm VR
£899 RRP £1299.99



D7200
Body Only
£889 RRP £939.99
c/w 18-105mm
£1089.99 RRP £1119.99



D610
Body Only
£1199 RRP £1529.99
c/w 24-85mm
£1699 RRP £2299.99



D750
Body Only
£1699 RRP £1799.99
24-120mm f4 G AF-S ED VR
£2299 RRP £2349.99

See our website for full details & specifications



NIKON DIGITAL SLR LENSES

	RRP	NOW
50mm AF f/1.8 D	£135.99	£115
105mm AF f/2.0 D DC	£781.99	£629
10-24mm AF-S DX f/3.5-4.5 G IF ED	£833.99	£649
16-85mm AF-S DX f/3.5-5.6 G ED VR	£573.99	£438
18-140mm AF-S DX NIKKOR f/ 3.5-5.6 G ED VR	£579.99	£479
18-200mm AF-S DX f/3.5-5.6 G IF-ED VR	£761.99	£564
18-300mm AF-S DX f/3.5-6.3 G ED VR	£849.99	£689
18-300mm AF-S DX f/3.5-6.3 G ED VR	£629.99	£499.99
24-70mm AF-S f/2.8 G ED Lens	£1565.99	£1299
24-85mm AF-S f/3.5-4.5 G ED VR	£519.99	£409
55-200mm AF-S DX Zoom-Nikkor 1:4-5.6G ED	£239.99	£199
55-300mm AF-S DX f/4.5-5.6 G ED VR	£377.99	£299
70-200mm AF-S f/2.8 G IF ED VR II Lens	£2085.99	£1605
70-300mm AF-S f/4.5-5.6 G IF-ED VR	£553.99	£459
TC-14E AF-S III 1.4 Teleconverter	£449	£399.99
TC-17E AF-S II 1.7 Teleconverter	£395	£309.99
TC-20E AF-S III 2.0 Teleconverter	£459	£368.99

See website for more lenses



AW130
COMPACT CAMERA Nikon

The camera that can go anywhere. Take it snorkeling, SCUBA diving, rafting or fishing - it's waterproof down to 100ft. Take it skiing or snowboarding - it's freezeproof to 14°F. Even take it biking, climbing or hiking - it can withstand drops from as high as 7ft. Always bring home amazing views

Yellow or Black **£260** RRP £279.99



Canon IXUS 275 HS
COMPACT CAMERA

Fashion stunning photos and Full HD movies with ease.

£159 RRP £189

DIGITAL SLR LENSES

TAMRON SUPER ZOOMS

With £50 Cashback and a 5 Year Warranty there has never been a better time to choose these award winning Tamron lenses...



18-270mm
F/3.5-6.3 Di II VC PZD
RRP £568.20 **£289.99**

16-300mm
F/3.5-6.3 Di II VC PZD
RRP £529.99 **£449.99**

CASHBACK
For the latest CASH BACK DEALS on lenses & cameras see website



TAMRON We also stock...

	RRP	NOW
16-300mm f/3.5-6.3 Di II VC PZD **£50 CASHBACK**	£529.99	**£449.99**
18-200mm AF F/3.5-6.3 XR Di II LD Aspherical [IF] MACRO	£240.60	**£131.99**
18-270mm f/3.5-6.3 Di II VC PZD	£568.20	**£289.99**
24-70mm F2.8 Di VC USD Digital SLR **£100 CASHBACK**	£1099.99	**£740.99**
70-200mm SP F/2.8 Di VC USD **£75 CASHBACK**	£1650	**£999.99**
70-300mm f4-5.6 SP Di VC USD Digital SLR	£439	**£249.99**
150-600mm SP F/5-6.3 Di VC USD **£100 CASHBACK**	£1150	**£949.99**



Wimberley
WIMBERLEY HEAD
The specialized tripod head for telephoto lenses
WH-200 **£520**

LENS PLATES
P10 **£49.50** P30 **£55** P50 **£55**
P20 **£55** P40 **£55**

THE PLAMP II
One end of the Plamp clamps to your tripod while the other grasps the object. Use the Plamp to stabilize windblown subjects
The Plamp II **£39**
12" Plamp II Extension **£8**



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DOME HIDES
Made from proofed and breathable material

	Standard 1.3 x 1.35m	Large 1.5 x 1.49m
1 Advantage Timber	£239	£279
2 All Purpose Snow	£239	£279
3 Khaki Camouflage	£239	£279
4 Desert	£239	£279
5 Camouflage	£239	£279
6 All Terrain	£239	£279

1 2 3 4 5 6



Canon EOS 750D
DIGITAL SLR

Effortlessly take your pictures to the next level with the latest DSLR technology & Scene Intelligent Auto mode.

c/w 18-55mm IS STM **£689.99**
c/w 18-135mm IS STM **£899.99**



EOS 1200D
c/w 18-55mm DC III
- FREE 8 GB Card
- Desktop Tripod
- Toploader Case
- Adobe Lightroom

£319 RRP £389.99



EOS 100D
c/w 18-55mm IS STM
£439.99 RRP £459.99



EOS 70D
Body Only
£743 RRP £869.99
c/w EF-S 18-55mm
£773 RRP £969.99
c/w 18-135mm IS STM
£989 RRP £1199.99



EOS 700D
c/w 18-135mm IS STM
£669 RRP £829.99
c/w 18-135mm IS STM & 40mm STM
£799 RRP £989.99
Bundle offer! See web
£489 RRP £599.99



EOS 750D
c/w 18-55mm IS STM
£689.99
c/w 18-135mm IS STM
£899.99



EOS 6D
Body Only
£1199 RRP £1699.99

See our website for full details & specifications



CANON DIGITAL SLR LENSES

	RRP	NOW
EF 50mm f/1.4 USM	£379.99	£244
EF 50mm 1.8 II EF50mm f/1.8 Filter Size 52mm	£129.99	£88
EF 85mm f/1.8 USM	£399.99	£251
EF 100mm f/2.8 L Macro IS USM	£1059.99	£635
EF 100mm EFM100mm f/2.8 USM Macro	£469.99	£385
EF-S 10-18mm f/4.5-5.6 IS STM	£299.99	£192
EF 16-35mm f/2.8 L II USM	£1789.99	£1119
EF 16-35mm f/4 L IS USM	£1199.99	£737
EF 17-40mm 4.0 L USM Lens filter size 77mm	£849.99	£549
EF 17-55mm f/2.8 IS USM	£999.99	£532
EF 24-70mm f/2.8 L II USM	£2299.99	£1399
EF 24-70mm f/4 L IS USM	£1499.99	£699
EF 70-200mm f/2.8 L IS II USM	£2399.99	£1530
EF-S 55-250mm f/4.0-5.6 IS STM	£349.99	£225
EF 75-300mm f/4.0-5.6 USM III Filter size 58mm	£349.99	£229
EF 100-400mm f/4.5-5.6L IS II USM	£1999	£1899
Extender EF1.4x III	£449.99	£319
Extender EF2x III	£449.99	£319

See our website for more lenses



SIGMA DIGITAL SLR LENSES

Available in Canon and Nikon Fit	RRP	NOW
24mm f1.4 DG HSM Lens	£799.99	£699
30mm f1.4 DC HSM Art Lens	£499.99	£379
35mm f1.4 DG HSM Lens	£799.99	£699
50mm f1.4 DG HSM Lens	£849.99	£699
105mm f2.8 EX DG Macro OS HSM Lens	£649.99	£399
10-20mm f3.5 EX DC HSM Lens	£649.99	£399
12-24mm f4.5-5.6 EX DG Mk11 HSM Lens	£799.99	£599
18-35mm f1.8 DC HSM Lens	£799.99	£649
17-50mm f2.8 EX DC OS HSM Lens	£689.99	£309
18-250mm f3.5-6.3 DC Macro OS HSM Lens	£499.99	£299
18-300mm f3.5-6.3 DC Macro OS HSM Lens	£499.99	£399
24-70mm f2.8 EX IF HSM Lens	£899.99	£599
24-105mm f4 DG OS HSM Lens	£849.99	£679
50-500mm f5-6.3 DG OS HSM Sport Lens	£1499.99	£999
70-200mm f2.8 APO EX DG OS HSM Lens	£999.99	£799
150-600mm f5-6.3 DG OS HSM Sport Lens	£1599	£1499
150-600mm f5-6.3 DG OS HSM COMP Lens	£1199	£899
EF 610 SUPER DG Lens	£259.99	£125
EF 610 ST DG Lens	£169.99	£85

CASHBACK on Sigma 10-20mm 3.5 EX DG HSM Lens

see website for CASH BACKS on lenses

COMPACT SMART CAMERAS



WB350F - Black or White
£138



WB50F - Black or White
£98



WB35F - Black or White
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HERO4
ACTION CAMERAS

Choose from HERO4 Black, with incredible high-resolution 4K30 and 2.7K50 video and high frame rate 1080p120 video, or HERO4 Silver, which pairs pro-quality video and photo capture with the convenience of a built-in touch display.

	INCLUDES	VIDEO	PHOTO	NOW
Hero4 Surf Edition	Wi-Fi Remote, Surfboard Mount & Camera Tethers	1080p60	12MP	**£289.99**
Hero4 Motorsports	Wi-Fi Remote, 1 Curved, 1 Flat Adhesive Mount	1080p60	12MP	**£289.99**
Hero4 Silver	1 Curved, 1 Flat Adhesive Mount	1080p60	12MP	**£289.99**
Hero4 Black Surf	Wi-Fi Remote, Surfboard Mount and Camera Tethers	1080p120	12MP	**£369.99**
Hero4 Black Motorsports	Wi-Fi Remote, 1 Curved, 1 Flat Adhesive Mount	1080p120	12MP	**£369.99**
Hero4 Black	1 Curved, 1 Flat Adhesive Mount	1080p120	12MP	**£369.99**



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ACTION CAMERA
The perfect entry level GoPro.
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HERO3
ACTION CAMERAS

Dream it. Do it. And capture it with your GoPro. HERO3 & HERO3+ cameras make it easy to document and share your life's most interesting experiences.
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MOUNTS

Suction Cup Mount	£39.99
Grab Bag of Mounts	£19.99

ACCESSORIES

Hero3 WiFi Remote	£79.99	Wi-Fi Attachment Ring+	£9.99
LCD Touch BacPac	£79.99	Wi-Fi Remote Mounting Kit	£19.99
Battery BacPac	£49.99	Wi-Fi Remote Charging Cable	£19.99
Rechargeable Battery	£19.99	Protective Lens	£19.99
Wall Charger	£29.99	Floaty Backdoor	£19.99
Auto Charger	£29.99	Hero3 Skeleton Housing	£49.99
Camera Tethers	£19.99	Standard Replacement Housing	£49.99
Anti Fog Inserts	£14.99	Std Housing BacPac Backdoor Kit	£19.99
HDMI Cable	£19.99	Std Housing Lens Rep Kit	£19.99
Curves Cable	£29.99	Lens Replacement Kit	£19.99
Composite Cable	£19.99	Bag Pack	£19.99
3.5mm Mic Adapter	£19.99	Extra Small Camera Case	£24.99

TRAIL CAMERAS



Bushnell
TROPHY CAM
TRAIL CAMERAS

Hybrid Capture Mode, Freeze Frame Shutter, Hyper PIR - just a few new features you'll see with these cameras. True HD video and Field Scan 2x return, proving why Trophy Cam remains the woods hardest-working trail cam. These cameras also bring stunning video capture technology.



NATUREVIEW CAM HD
- HD Video
- 8MP Full Colour Camera
- Field Scan 2x
- Runs up to 1 year on one set of batteries

RRP £225 **£149**



TROPHY CAM ESSENTIAL HD
- 1280x720p Video
- Low Glow LEDs
- 12MP Camera
- 3.5 or 12MP Full Colour
- Field Scan 2x

RRP £170 **£149**



TROPHY CAM AGGRESSOR HD LOW GLOW
- Super high 1920x1080p
- 14MP Camera
- Full Colour
- Field Scan 2x

Brown RRP £235 **£199**
Camo RRP £260 **£215**



TROPHY CAM AGGRESSOR HD BLACK LED
- Super high 1920x1080p
- 14MP Camera
- Full Colour
- Field Scan 2x

Brown RRP £270 **£235**
Camo RRP £285 **£249**



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18 200 F3.5/5.6 AFS VRI £249
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24 F2.8 AFD £299
24 50 f3.5/4.5 AF £129
24 70 F2.8 AFS m box £1099
24 70 F2.8 AFS box £1049
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35 80 F4/5.6 AFD £49
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50 F1.4 AFD £179
50 F1.8 AFD box £79
60 F2.8 AFD £199
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70 200 F2.8 AFS VRI £749
70 300 F4.5/5.6 AFS M box £329
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170 500 F5/6.3 DG £349
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17 35 F2.8/4 £169
17 50 F2.8 XR Di £199
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DIGITAL DOCTOR

Got a photo in need of some help? Let our expert transform it into something new. Send pics to ***dpimages@bauermedia.co.uk***

Our Photoshop medic conveys an experience with multiple shots...

JONATHAN PETERSON SENT US this image of an island he shot off the coast of the walled city of Dubrovnik in Croatia. His pic is a record of his visit, but his frustrations will be familiar to anyone who's ever taken a lacklustre holiday snap. "Our trip really opened my eyes to a side of Croatia I knew nothing about. We had spectacular weather and went snorkelling with a guide who pointed out some amazing, exotic fish. I had no idea Croatia could be so vibrant and beautiful. When I got home and checked my shots I was crushed to find that none of them really captured the experience of being there."





Digital Doctor says: We all know that feeling, don't we? You've gone on the trip of a lifetime and all you want is a photographic memento, but when you later sort through your images you find they fall short of the experience! The cool, evening breezes, the amazing underwater snorkelling trips, the relaxing boat tours – a single shot struggles to convey it all.

Well, one way to make a single shot encapsulate a range of experiences is to combine multiple photos into one image. Sometimes the most important thing is that a creative work captures the *feeling* of being there, even if that means going beyond a single frame and getting busy with Photoshop.

For Jonathan's shot, I took his island view as the starting point and decided to dial everything up to the max. First, I replaced the sky with one that felt more like Jonathan's description of the experience, using a Photoshop Layer Mask. I then created a false waterline using the Pen tool and some colour Gradients.

Beneath this I composited in an underwater shot from one of my own snorkelling trips, again using a Layer Mask. To add some focal points, I took a pic of a fish from an aquarium shot and another of birds in flight, and added those into the frame the same way. I also did a little dodging and burning to make sure the lighting of each element matched. I thought the dark blue of the sea in the original shot was at odds with Jonathan's description of the experience, so finally I added a Hue/Saturation Adjustment Layer to push the hues in a more appealing direction. The result is bright sunlight and an exotic underwater scene that's more in line with the feelings Jonathan experienced.

Even though the final result is a combination of five different shots and features a large slab of artistic licence, it is more true to Jonathan's recollection. I hope it will remind him of his trip whenever he looks at the image!

The DIGITAL DOCTOR will see you now!

■ To send one of your problem pics to our Digital Doctor, email it to *dpimages@bauermedia.co.uk* and tell us about the shot: where it was taken, why you took it and what you were looking to achieve. Include a mugshot of yourself with your picture, and the best entries will be published and receive some digital surgery from our resident Photoshop guru!



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